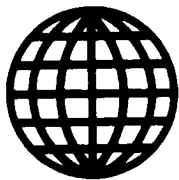


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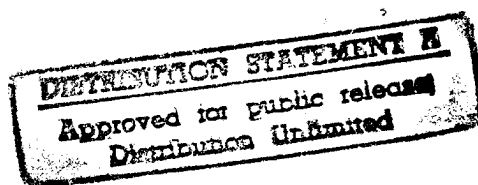
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SOVIET UNION ECONOMIC AFFAIRS

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ESTONIAN GOSAGROPROM BOOSTS FAMILY CONTRACT USE

Moscow PARTIYNAYA ZHIZN in Russian No 5, Mar 87 pp 20-23

[Article by Kh. Beldi, chairman of the Estonian SSR State Agroindustrial Committee [Gosagroprom]: "Supporting and Developing Family Contracts More Actively"]

[Text] Tallin--At a party meeting of the apparatus of the agroindustrial committee, which examined the results of the January 1987 Plenum of the CPSU Central Committee and the tasks of communists, the topic under discussion was restructuring in various spheres of village economy. Meeting participants focused attention on the main question--how to teach people to work in the new manner, how to break the psychological barrier of old concepts and how to most quickly reach the goals indicated in the 12th Five-Year Plan.

It seems that thanks to the expansion and extension of forms of labor organization such as cost accounting, collective contracts and increased activeness of workers in the struggle for a high level of labor productivity and for conserving economic resources, we succeeded in achieving fair indexes in the republic as a whole. In support of what has been said let me present several economic indexes. Last year milk yield per cow reached 4,024 kilograms in the public sector. Average daily weight gain of feeder cows equalled 650 grams and the weight of each young bull sold was 450 kilograms. Each agricultural worker produced 15,500 rubles worth of product. Most importantly, production costs began to decrease both in farming as well as in livestock farming.

However, these are average indexes. Unfortunately they differ strikingly from those which usually appear on the bottom lines of reports from the republic's TsSU [Central Statistical Administration]. There are many enterprises here in which cost accounting and collective contracts have not yet been introduced. Work with such enterprises in terms of restructuring is an untouched area.

At our republic party congress a great deal was said about accelerating the development of agricultural production. The republic's livestock farmers needed 12 years to raise the productivity of cows from 3,000 to 4,000 kilograms of milk per year. We plan to increase yield to 5,000 grams within at the least 10 and at the most 15 years. In any case, by the end of this five-year plan we must produce an average of 4,300 kilograms of milk per cow.

As one can see, the task that has been established is an extremely difficult one. After all, the higher the productivity, the harder it is to produce each additional kilogram of milk. Judging by last year we took too small a step in this direction and in actual fact we are standing in one place--we produced only 4,024 kilograms of milk per cow. Consequently, we must more persistently seek out reserves and act more boldly, actively and creatively.

In order to pull up the laggards and to improve the training of workers, a fairly well-organized system has been created for the training of cadres from top to bottom. In particular, republic and rayon practical studies and seminars are being carried out directly in enterprises. The directors of the rayon link, specialists, workers and kolkhoz farmers are now completing courses dealing with the introduction of brigade contracts and cost accounting. Most attention there is being focused on the study of the new economic mechanism of management and on the introduction of intensive technologies. We will also complete the certification of specialists before spring.

We have at our disposal another powerful reserve for further improving labor productivity and for decreasing expenditures. I am thinking about the introduction of family contracts. At the January 1987 meeting of the CPSU Central Committee, which discussed the tasks of party organizations and soviet and economic organs as they related to the implementation of the resolution of the CPSU Central Committee, "On Urgent Measures to Increase Labor Productivity in Agriculture on the Basis of the Introduction of Efficient Forms of Organization and of Cost Accounting," emphasis was placed on the fact that family contracts are being utilized extensively in all regions of the country. Under the conditions present in Estonia, where a farmstead system exists, it becomes the most acceptable form for organizing collective labor from a practical standpoint.

Estonia has long been well-known for its mastery in producing milk and meat and for its ability to make tasty foods from them. The "secrets" of this mastery are passed on from generation to generation. This is why family contracts are utilized here first and foremost on livestock-raising farms. Today in the republic we have 124 family farms operating successfully. Most of them are located in Paydeskiy, Pylvaskiy, Kingiseppskiy and Kharyuskiy rayons. It is characteristic that on such farms, which have finally received their own genuine managers, one immediately senses the caring attitude toward the upkeep of animals, the cleanliness and the order, and not the previous formalism, the "from and to." From an early age the children of these families become accustomed to public labor. They acquire working habits and a love for the farming professions early in life. Worthy successors develop in these families. Whereas at first primarily experienced workers agreed to make the transition to family contracts, today this movement is being swelled by young people.

The young Graverson couple of Kalana Farm in Payuzi Kolkhoz, Yygevaskiy Rayon, takes care of 56 cows. A contract has been concluded with them which stipulates the production volume, the limits on feed expenditures and the fund for wages and for providing material incentives for the end product. Each

month a bonus is paid out for improved milk quality and once a year--for decreases in direct expenditures per production unit.

The family carries out all the farm work with the exception of feed transport. During the summer the Graversons allow the cows to graze on cultivated pastures that belong to the farm. There are 24 hectares here, and with the help of an electric fence full-value feeding for animals and the preservation of the entire herd are secured with minimal expenditures. The productivity of cows is high. Last year milk yield per cow increased to 5,149 kilograms and gross milk production--to 290 tons. All products sold to the state were of first quality. Labor expenditures per quintal of milk comprised fewer than 2 hours and prime cost dropped to 24 rubles.

All of this attests to the high personal level of skill of livestock farmers. Last year Mariya Graverson became the victor in international competition among masters of machine milking from CEMA countries.

Family contracts for raising a replacement herd are becoming even more widespread in the republic. Under conditions of intensification it is necessary each year to discard one-fourth of the herd of unproductive cows. Where do we obtain replacements for them? The demand for good primapara heifers is growing. Here family farms are the answer. Usually large capital expenditures are not required to organize them. Usually old, renovated facilities are provided for family farms.

For example, husband and wife Lembit and Layne Moorasty and their 20-year old son Endel raise 230 heifers from the age of 1 month in Tammiku Kolkhoz of Kokhtla-Yarveskiy Rayon. The son takes the calves out to pasture and the parents clean and feed them. Having entrusted the Moorastys with the young animals, 16 months later the kolkhoz receives well-fattened, full-value primapara heifers which would be a credit to any farm. It is precisely because of family contracts that the enterprise is able to deal with the problems related to replenishing the herd.

Still, in addition to this I would like to focus attention on a number of fairly important problems that require solutions. For example, despite all its advantages, the family contract is developing too slowly, primarily by its own accord, and not according to a planned scientific base. Further, people do not know what the optimal load or wages per family member on a family farm should be. Moreover, even experienced specialists have not come to an agreement on these questions.

Let us say that the husband and wife team of Vyayno and Vayke Moozesy of Tammiku Kolkhoz take care of 100 cows. Several years ago four milkmaids worked on the farm. One of them retired and the others left their jobs for various reasons. It was impossible to find replacements for them for a long time. But here we had a piece of luck--Vyayno and Vayke agreed to take the entire burden upon themselves. They have their own house nearby in the small town of Yykhbi. Very conveniently, it is only 2 kilometers to the local farm.

The kolkhoz administration concluded a contract with the Moozesys according to which the kolkhoz was to fully supply the farm with feeds and veterinary and technical services. The family's wages are paid according to the usual rates just as on other kolkhoz farms--for milking, for removing manure and for maintaining the calves.

Today the Moozesy's are earning 2-3 times more than before. Isn't it too much? In our opinion wages should reflect labor. Although a milk conduit, a transporter for manure removal and other equipment has been installed on the farm, how much more work must be done to complete the operation manually! The kolkhoz tractor operator regularly brings silage, Swedish turnips, potatoes and straw here but dumps everything in a nearby shack. From there the Moozesys bring the feed, as well as the previously-procured hay, manually to the animals.

But here is a characteristic feature. Thanks to their effort the Moozesys were able to increase the productivity of kolkhoz cows from 3,000 to 4,500 kilograms of milk per year in a short period of time, an increase by a factor of 1.5. The cost there is much lower than the kolkhoz average.

Still arguments about wages for family contracts do not abate. It is possible that one of the reasons for this is that the attitude toward family contracts is changing too slowly. Many party and economic directors who think in the old way cannot remove their psychological barriers. In their actions they often undermine the foundation for family contracts; they are in no hurry to disseminate the experience and do not give families the necessary help. For example, can't the engineers of Tammiku Kolkhoz mechanize the Moozesy's farm for feed distribution or design a feed kitchen there?

The economic service of the enterprise is also changing slowly. This is largely the fault of the RAPO [Rayon Agro-Industrial Association] and the central apparatus of the republic's agro-industrial committee. They are not yet dealing properly with generalizing the experience we have accumulated with family contracts. This question has never been singled out for examination by the republic's gosagroprom. Having discussed the matter, we decided to strengthen organizational and educational work related to the introduction of family contracts.

At the meeting of the party committee we heard reports from communists--from A. Sirendi, the director of the economics administration, and from Yu. Kulbin, deputy chairman for the production and processing of livestock products--concerning their activities relating to the introduction of family contracts. Their work in this direction has been recognized as unsatisfactory. The members of the party committee made many criticisms of other Gosagroprom specialists as well.

When on assignment in local areas, they propagandized the advantages of family contracts poorly and were often not capable of explaining how to conclude contracts with people or how wages were paid. And we do not at all understand the passivity of directors when the topic of conversation turns to

the introduction of family contracts within the branches of farming. Here we essentially have unturned virgin lands although favorable conditions for making use of them developed long ago.

Last year 4,500 persons worked according to individual contracts to raise food root crops; they exhibited a very high level of labor productivity. The majority of them are ready cadres for family contracts. And why is it that this contract is absent within the sphere of, let us say, potato or vegetable production? These are questions which still must be dealt with.

We understand well that we must more persistently and systematically work for the transition of kolkhozes and sovkhoses to new organizational forms of labor and management. We must find the most simple, comprehensible, and at the same time effective measures for providing incentives for a high level of labor productivity.

In fulfilling party requirements based on the existing situation, the republic's Gosagroprom board assigned the economic administration together with the economic services of RAPO the task of developing recommendations within a short period of time on conditions for introducing family contracts as well as on the corresponding norms for work loads and wages. I feel that these practical measures will provide help to enterprises and will enable family contracts to move into the next, higher stage of development.

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KIRGHIZ CROP SITUATION SURVEYED

Talasskiy Mountain Irrigation Project

Moscow SELSKAYA ZHIZN in Russian 21 Jan 87 p 1

[TASS Report: "High Mountain Fields"]

[Text] Talas--Irrigated cropland in Kirghizia is moving up to heights above the clouds. A previously unfertile plateau between spurs of the Talasskiy Range has become cropland for the Sovkhoz imeni Cholponbai. A large water system has been put into operation here. It is capable of irrigating hundreds of hectares suitable for feed production.

Having undertaken a course to accelerate reclamation in the high mountain lands, irrigation system builders in the republic plan more than 10,000 hectare annual increases in irrigated area.

Chuyskaya Valley Grain

Moscow SELSKAYA ZHIZN in Russian 7 Mar 87 p 1

[TASS Report]

[Text] Frunze--Since the first days of spring, grain growers in the Chuyskaya Valley, a large grain supplier for Kirghizia, have intensively worked on winter grain crops. Today they completed top dressing on about 80,000 hectares of grain. This measure was more effectively performed than previously, usually it took all winter. Now fertilizers were applied right after the snow cover melted and only took a few days. The productivity of equipment working in consolidated detachments increased 1.5 fold over normal. This was attained through the introduction of collective contract and labor payments for final results. Grain growers have obligated themselves to increase the return from each hectare by at least 3 quintals.

Kirghiz Irrigation Begins

Moscow SELSKAYA ZHIZN in Russian 25 Mar 87 p 1

[TASS Report]

[Text] Frunze--The rapid melting of snow cover came to the service of field workers in Kirghizia. Collecting runoff water in canals and reservoirs, they have directed it to farmland. Today irrigation workers in the southern part of the republic, Talasskaya Oblast and the Chuyskaya Valley began watering alfalfa, orchards, and seeded pastures.

Growers plan this effective soil moisture replenishment measure on more than 300,000 hectares

Chuyskaya Valley Irrigation

Moscow EKONOMICHESKAYA GAZETA in Russian No 12, Mar 87 p 19

[Text] Grain growers in the Chuyskaya Valley, a large grain supplier for Kirghizia, have intensively worked on winter grain crops. Today they completed top dressing on about 80,000 hectares of grain. This measure was more effectively performed than previously, usually it took all winter. Now fertilizers were applied right after the snow cover melted and only took a few days. The productivity of equipment working in consolidated detachments increased 1.5 fold over normal. This was attained through the introduction of collective contract and labor payments for final results.

Kalininskiy Rayon Grain Planting

Moscow PRAVDA in Russian 27 Mar 87 p 2

[Article by Yu. Razgulyayev, PRAVDA correspondent: "Without Weather Delays"]

[Text] Kirghiz SSR--It only took 65 hours for grain growers at the Chuyskiy Sovkhoz in Kalininskiy Rayon to complete grain planting. Having excellently prepared equipment and concentrating it in two complexes, they were literally able to open a "window" in the bad weather. During this time many farms waited until the wind blew away the clouds.

At other farms one hears that the Chuyskiy land dries out more quickly. There is some share of truth in this. However, the fields of the Stavropolskiy Sovkhoz and the Kolkhoz imeni Ilich are located nearby and they are still a long way from completing work. Because of poor organization the Kolkhozes imeni Krupskaya and Put k Kommunizmu lost valuable time, and now we are talking about minutes. Even several days after planting was completed at the Chuyskiy, the Serp i molot Sovkhoz had not begun planting.

Fortunately, these external events do not determine the course of planting in Kalininskiy Rayon. In spite of the difficult weather conditions, field work is more intensive than last year. Half of the farms "caught" the sunny days and

used the short "window" to put seeds in the ground. Farms in Moskovskiy and Panfilovskiy rayons, where three-fourths of the area have been planted, were even more successful in their spring work.

However, there should be no relaxing. Even Kalinin growers must work at least 3,000 hectares, although the optimal time has passed and the weather is still not changing for the better. Managers who were complacent at the beginning of spring are beginning to get nervous. Equipment is moved from one area to the next, gasoline burned and machines broken down. Serious losses will be suffered by those who hoped for good weather and who lose valuable time because of disorganization.

Problems in New Agronomic Techniques

Frunze SELSKOYE KHOZYAYSTVO KIRGIZII in Russian No 1, Jan 87 pp 14-16

[Unattributed article: "Scientific-Technical Progress in Crop Production"]

[Excerpts] During the first year in the 12th Five-Year Plan, the political and labor energies of workers in Kirghizia, like the entire Soviet people, were directed towards the practical implementation of the 27th CPSU Congress's historic decisions. Following the Party's call, the Kirghiz are actively engaged in All-Union Socialist Competition for successfully completing the 12th Five-Year Plan. Tens of thousands of progressive industrial and agricultural workers in the republic are laboring under the slogan: "The targets for two years of the Five-Year Plan by the 70th Anniversary of the Great October Revolution".

In the first year of the new Five-Year Plan, the basis for agro-industrial complex workers is the words from the Central Committee's Political Report to the 27th Congress: "The task which we must rapidly solve is to completely supply the country with foodstuffs." This task is especially important to workers in the republic's agroprom, as we still lag behind all-union levels with regard to per capita food consumption. The 28th Congress of the Kirghiz Communist Party and the central committee plenum worked out a specific and precise program to sharply increase foodstuffs production. In particular, during the Five-Year Plan's first year it is intended to harvest at least 24 quintals of grain per hectare, including 37 quintals from irrigated land, increase grain corn yields to 64 quintals and produce and sell the state more vegetables, potatoes, fruit and grapes than last year.

Our grain growers are happy about their achievements. They had a fairly good grain harvest, obtaining 25.6 quintals of grain from each hectare. This is 2.4 quintals more than 1985 and 2.6 more than socialist obligations. Each irrigated hectare yielded 38 quintals, 1.7 quintals more than last year. Yields in Kantskiy Rayon averaged 37.5 quintals (50.7 quintals on irrigated land).

Big achievements were attained by progressive workers at many farms in Osh, Issyk-Kul and Naryn oblasts.

Our corn growers' labors were also crowned with significant results. Corn is also grain. Last year more than 61,000 hectares were planted. Corn growers in Osh Oblast set a good example of how to raise a bountiful harvest. Progressive farms in Aravanskiy, Kara-Suyskiy and other rayons obtained 80-100 and more quintals. The basis for the high yields is intensive technology for growing this crop, which is widely used in Osh Oblast.

Crop rotations are the alpha and omega of modern crop production. Our scientists (KirNIIZ) have done quite a lot to develop a crop production system for each region in the republic. The foundations for such systems are scientifically based crop rotations. It is now clear to us that without their introduction and mastery at kolkhozes and sovkhoses it is unthinkable to expect a sharp improvement in the efficiency of field work, as required by 27th CPSU Congress decisions.

What is actually being obtained?

According to draft plans worked out by Kirgizgiprozem, 2,466 crop rotations have been introduced in the republic in recent years. However, it is no exaggeration to say that they are being mastered at a snail' pace, by 1986 only 511 had been put to use.

Crop rotations are only being very slowly introduced in Issyk-Kul Oblast. A number of farms have not mastered a single crop rotation.

In Talas Oblast only 41 out of 239 crop rotations introduced are actually used. Agronomic services at the Beyshek Kolkhoz in Kirovskiy Rayon, the Dzhety-Suu, Naryn, Uch-Terek and Sovet Sovkhoses in Tiktogulskiy Rayon and the 40 Years of October and Kaindy in Manasskiy Rayon have not lifted a finger to begin using crop rotations.

In Osh Oblast they have been mastered on 400,300 hectares, 32 percent of total area.

There is a difficult situation in Naryn Oblast, Out of 292 crop rotations introduced here only 21 have been mastered (in Kochkorskiy Rayon -- 18 and in Dzhumgalskiy -- 3).

In rayons directly subordinate to the republic 73 of 610 crop rotations have been mastered. This situation looks especially bad in Keminskiy Rayon (0), Chuyskiy (2), and Panfilovskiy Rayon (6).

There are many reasons for the unsatisfactory mastery of crop rotations. All of them involve Kirghiz SSR Gosagroprom. Two of them should be pointed out: inconsistent land use, which arises due to various types of reorganizations; and the high turnover of agronomic cadre, leading to a loss of personal responsibility for mastering crop rotations. There is one way out -- to tighten republic Gosagroprom's control over this important matter.

High yielding varieties have a large role in improving grain crop productivity. Scientists have created such varieties. These include the winter wheats Lyutestsens-46, Frunzenskaya-60, Eritropermum-80, Dvuruchka

Intensivnaya, the spring barleys Nadya, Donetsk-8, Odesskiy-100, Druzhba and others. All of them have higher potential yields than previously regionalized varieties. They are our richest reserve for increasing grain production in the 12th Five-Year Plan. It must be increased by 15 percent over the past plan.

For the republic as a whole the plan for the production introduction of new grain crop varieties and hybrids was overfulfilled in 1986: they were planted on 225,900 hectares instead of the 215,000 called for by the plan. The targets have been overfulfilled for the introduction of these promising varieties, for which the seed is still scarce: Frunzenskaya-60, Lyutestsens-46 and for varieties of winter and spring barley, oats, local and foreign corn hybrids. The situation is good in Osh and Talas oblasts and almost all rayons directly subordinate to the republic.

However there are still negative aspects to the production introduction of new high yield varieties. Agrospecialists in Issyk-Kul and Naryn oblasts and some rayons in other regions are intolerably slow and, what is more conservative in this regard. For example, in the Priissykkule area and Panfilovskiy and Moskovskiy rayons they are still attached to Bezostaya-1, ignoring the new varieties. In some places criminal negligence is obvious. In 1985, Yu. Morozov, the former chief agronomist at the Kolkhoz Pervoye Maya in Ak-Suyskiy Rayon, Issyk-Kul Oblast allowed gross violations in techniques for growing Lyutestsens-46 wheat. As a result the entire crop perished. This compromised the excellent new variety throughout the entire Priissykkulye area. Republic Gosagroprom had to exert considerable efforts to convince oblagroprom specialists that this variety is high yielding and should be extensively planted.

With the direct connivance of the Oblagroprom, a number of farms in Issyk-Kul Oblast did not pick up the Dvuruchka Intensivnaya wheat seed allocated to them. As a result they did not fulfill their planting plans.

There is a severe shortage of seed for high yield wheat varieties, especially in the Priissykkulye area and in the south of the republic. Also, in Osh Oblast there is a shameful practice whereby in many rayons seed plots for grain crops are planted on unirrigated land heavily infested with weeds which are difficult to eradicate. What kind of yields can be obtained from seeds of Eritrospermum-80, harvested from seed plots at the Kolkhoz imeni Zhdanov in Aravanskiy Rayon, or the Kok-Dzhar Sovkhoz in Naukatskiy Rayon, where the average yields were 7.5 and 4.2 quintals per hectare?

All these shortcomings in mastering progressive varieties are paid for by hundreds of thousands of quintals of grain not delivered to the state.

At the meeting of party activists in Krasnodar Kray, General Secretary of the CPSU Central Committee M. S. Gorbachev stressed that the intensive path in the agrarian sector is a key task. Top priority is given to the intensive growing of grain crops of economic and political significance.

Last year in our republic intensive technology was used to grow winter grain crops on 20,000 hectares. At progressive farms yields increased by 8-10 quintals per hectare. In the entire republic yields averaged 44.5 quintals per

hectare on fields where progressive technology was used. This is 6.5 quintals more than ordinary technology.

Grain crops in our republic occupy 203,000 hectares, including 112,000 of irrigated winter grains. It is not hard to calculate how many hundreds of thousands of tons could be delivered to granaries if intensive technology was used to grow grain on this area. However, only 60,000 hectares of winter grains were farmed in the new way.

Intensive technology for growing grain corn is poorly used at a number of kolkhozes and sovkhoses in the Chuyskaya Valley. This crop's yields here are 1.5-2 fold lower than at farms in Osh Oblast. This can only be explained by the gross indifference towards technological progress on the part of farm agronomists and RAPO specialists.

In the republic there have not yet been any conclusions drawn from experience in the Astrakhan industrial method for vegetable growing, even though farms have been introducing it over several years. There is an example for imitation -- the Pobeda Kolkhoz in Tyupskiy Rayon, Issyk-Kul Oblast. It is sufficient to note that at this farm all elements of the method have been mastered and are giving significant results -- high yields, a threefold improvement in labor productivity and lower production costs than other farms.

To assure steady growth in foodstuffs production when intensive technology is used, the problem of improving soil fertility has become especially acute. The presence of sufficient humus is considered one of the most important indicators of soil fertility. Scientists in the republic are concerned about its decline in several zones. They have suggested a set of measures which will not only maintain soil fertility, but systematically improve it. Emphasis is placed upon the scientifically based use of organic and mineral fertilizers.

However, there is a general failure to observe scientists' recommendations. According to agrochemical service data, in 1984 in Osh Oblast nitrogen fertilizer applications to corn exceeded norms by 146 kg per hectare, those to vegetables and melons by 89 and to potatoes -- 102. Norms for nitrogen fertilizer applications to grain crops were not observed in Kalinskiy, Alamedinskiy or Issyk-Atinskiy Rayons. There are excessively high norms for phosphorus fertilizer applications in Chuyskiy Rayon.

This attitude towards fertilizers not only causes large additional outlays, but also causes real damage. It is well known that excessive applications of nitrogen fertilizers lead to the build-up of nitrates in plants, groundwater and reservoirs in quantities dangerous to people and animals.

The use of intensive technology for growing various crops requires not simply the application of specific amounts of certain fertilizers, but a calculation of nutrient balances of essential elements in the soil. Only this approach assures high soil fertility.

In order to complete a rapid turn to applying science and technology in fieldwork it is necessary to decisively master zonal crop production systems and crop rotations, introduce high yield varieties, use intensive technology

and rationally apply all types of fertilizers. In short, do everything to create the basis for improving yields and stability in crop production. This is a matter for party organizations, all elements in the republic's agro-industrial complex, farm managers and specialists and all field workers. Only intolerance towards shortcomings in applying science and technology and towards routine and inertia will bring success in realizing the Food Program and in solving the tasks which the party has posed to all crop growers.

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CROP PROGRESS IN OREL, KURSK OBLASTS SURVEYED

Planting Begins in Orel Oblast

Moscow TRUD in Russian 20 Aug 86 p 1

[Text] Orel -- Growers in the Oblast began the massive planting of winter rye. Here this crop is preferred to winter wheat. It occupies more than half the area devoted to winter grain crops.

Belgorod Growers Vow Increased Yields

Moscow TRUD in Russian 2 Apr 87 p 1

[Interview with A. Plokhotin, chief, Department for the Production and Processing of Plant Products, Belgorod Agro-Industrial Committee, by V. Kozlyakov, TRUD special correspondent: "For the Sake of a Bountiful Harvest"; first paragraph is source introduction]

[Excerpts] Belgorod Oblast growers, engaging in socialist competition for celebrating the 70th year of the Great October Revolution, supported the initiative of Krasnodar growers and obligated themselves to obtain an additional ton from each hectare of grain grown by intensive technology.

Krasnodar--Belgorod. Hundreds of kilometers separate these oblasts, but close working ties draw them near. Hand in hand, not hiding experience from one another, they started introducing collective contract and taught one another how to grow high yield grain corn and mastered intensive technology. Belgorod growers stretched out their hand in friendship to compete with those from Krasnodar, who advanced the initiative "An additional ton from each intensive hectare."

"We accept, approve and will give the ton." This was their response. These words must be answered, they are high obligations... Is such acceleration of the grain fields possible, is there any basis to this? These are the questions which our special correspondent V. Kozlyakov directed to A. Plokhotin, chief of the Department for the Production and Processing of Plant Products, Belgorod Agro-Industrial Committee.

[Answer] Yes, we supported the Krasnodar growers and decided to use intensive technology on 207,000 hectares of winter crops, 78,000 ha of grain corn, 13,000 ha of peas and 5,000 of buckwheat. Through the introduction of new technology it is intended to obtain at least 312,000 tons of grain, about 10 quintals per hectare. These goals are not rosy dreams. Verified calculations are behind each figure. Calculations have been made of each ton of fertilizer, each field's efficiency factor and each machine's capacity. Last year 39-40 quintals of wheat were harvest from each intensively farmed hectare in Ivnyanskiy, Volokonovski and Shebekinskiy rayons. Even higher average yields, 67 quintals per hectare, were obtained at the 50 Years of October Kolkhoz in Korochovskiy Rayon. I cite these figures to show what our Belgorod land is capable of and to critically evaluate the actual situation. For together with such yields we have rayons which do not harvest 30 quintals per hectare. It is quite possible to bring the lagging farms up to the level of the progressive ones. Then it would be possible to obtain a large increment.

Last year 280,000 hectares of grain crops were grown by intensive technology and yielded about 170,000 tons of grain. However, even this increment cannot be considered maximum. After all, if one does not get an additional ton of grain from each intensive hectare then costs will not be recovered. After analyzing our reserves we came to the conclusion that last year our growers did not have enough experience and knowledge nor did they observe optimal schedules for fertilizer application. These shortcomings are now being taken into account.

[Question] What, in your opinion, are the constraints in mastering intensive technology?

[Answer] They are well reflected in the letter from Kuban grain growers. I agree with them that equipment quality is improving, but demands made upon it are increasing in connection with the mastery of progressive technology. We completely support the complaints which Kuban machinery operators have made to industry and designers. We also experience a shortage of special machines and chemicals, especially for fighting diseases and pests.

[Question] Spring is slow in coming. What should grain growers' tactics be under these conditions?

[Answer] One can now confidently say that the snow will melt quickly and that there will be a decisive increase in temperatures. This requires that we work quickly in the fields. Taking spring's peculiarities into account, kolkhozes and sovkhoses have developed work plans for the spring field campaign and are intending to do field work two shifts daily. The tension is increasing. I am glad that, as laboratory data shows, winter crops survived the winter in satisfactory condition. Given an intelligent, careful attitude towards such crops, grain growers can have a good year and a solid increment from intensively farmed fields.

Plant Protection Work in Orel Oblast

Moscow ZASHCHITA RASTENIY in Russian No 2, Feb 87 pp 14-15

[Article by N. N. Timoshenkov, deputy chairman, Orel Oblast Agro-Industrial Committee and V. P. Pavlenko, acting chief, Orel Plant Protection Station: "We are Increasing Winter Fields' Productivity"]

[Excerpts] Growers in Orel Oblast are convinced that only by the extensive use of intensive technologies can they fully utilize winter fields' potential and attain maximum crop productivity. Last year many farms which had introduced progressive methods for growing winter crops obtained high yields. This was a year with severe frosts, lack of snow cover and a prolonged cold spring and drought. These conditions are quite conducive to the development of diseases, pests and weeds.

The situation was similar for most farms in the oblast. It is hard to say how all this was handled in previous years. Now such losses from extreme conditions are not so great. Most places did not simply implement agronomic recommendations, but made corrections in view of the specific situation.

In the oblast intensive technology is not viewed as just the sum of quintals and kilograms of fertilizers and pesticides, but as a qualitatively new level of farming, the result of combining science and progressive experience. Work began with cadre training. Instruction centers to train RAPO specialists, chief agronomists at farms, middle level specialists and machinery operators were set up in all rayons. There were oblast and rayon seminars with practical demonstrations of intensive technology's components. Scientific associates and specialists from other oblasts were invited to the seminars. All this helped to quickly restructure work and to show initiative.

One of the main elements in the technology is seed treatment. This has become mandatory for all farms in the oblast. Taking into account the spread of diseases, winter wheat seeds were treated with the appropriate preparation; for preventing lodging, and improving resistance to unfavorable conditions some of the seeds were treated with TUR.

Attention was also directed to important questions such as the selection of good predecessors, planting first class seeds at optimal times, rational applications of nitrogen fertilizer. However, everybody considers that the use of chemical plant protection agents is the basis for the technology. After carefully monitoring plants and evaluating their phytosanitary conditions, Fundazol was applied for root rot, and in the spring-summer there were double sprayings against rust and powdery mildew (the first -- Tsineb, and the second Bayleton).

Plant protection workers face important tasks in 1987. Intensive technology for growing winter wheat will be used on 160,000 hectares in the oblast. It is intended to obtain 35-40 quintals of grain from each such hectare. After monitoring, Fundazol was applied to 46,000 hectares of winter wheat, all seeds were treated, more than half with systemic preparations and Simazin was used

on 6,000 hectares. Agrochemical and phytosanitation descriptions were compiled for each field where plant protection work volume for the spring was specified. The basis for high yields has already been laid, however, plant protection workers will not weaken the attention paid to intensive crops and are carefully preparing for the season in order to make all applications on time and obtain the maximum effect from them.

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Flood Problems in Kursk

Moscow IZVESTIYA in Russian 5 Apr 87 p 3

[Article by V. Kulagin, IZVESTIYA correspondent: "In the Flooded Zone"]

[Text] Kursk--Kursk weather forecasters warn that, with the active intrusion of warm air over the Seym and Tuskar Rivers around the Oblast center, one cannot exclude a repeat of the 1970 flood, the largest in 50 years.

The present situation is more alarming because it is difficult to predict: Even at the end of March the snow cover over large parts of the territory was 2-3 fold higher than the multi-year average. Over 1,000 tons of water have accumulated on each hectare. The soil is frozen almost 1 meter deep it was -20 degree C night almost to April. The land is thawing slowly. Ice has remained on the rivers almost a week longer than usual. According to forecasters, in April air temperatures are expected to average 5-8 degrees higher than normal.

V. Logvinov, the chairman of the City Flood Commission and first deputy chairman of the Gorispolkom reckons, "We also realistically evaluate this danger. All our flood prevention measures are based upon maximum water rise in the Seym and Tuskar Rivers. About 6,300 people live in the flood zone, mainly in Kirovskiy Rayon. Our deputies and workers in communal services have visited all families and explained evacuation procedures. Unfortunately, only one third of the predominantly private homeowners have agreed to leave their homes.

Eight schools, a House of Culture for Railroad Workers and the Kirovskiy Rayon Training-Production Combinat have been prepared for the evacuees. Back in mid March there were meetings with residents at all points. They became acquainted with the procedures for housing, feeding and medical services, safety measures and for protecting personal property during the evacuation."

N. Lyulka, Raispolkom secretary, explains, "We have given special attention to single people and aged citizens. A facility was set up for them. Special account has given to old age and emergency homes in the flood zone."

N. Fatyanov, Gorkommukhoz [City and Communal Operations] leader, adds, "We have examined all alternatives. The biggest concern is to assure water supplies to TETs-4, the main source of heat for the central part of the city. Additional waterlines have been laid to it from the Main Kiev Reservoir. All stations have been completely sealed. Monitoring wells have been drilled to prevent polluted water from entering the system and the needed amounts of

chlorinating agents have been brought in. All energy supplies to the city's water collectors have been carefully checked. Four mobile generating units are at the disposal of the Flood Commission staff.

Citizens have made substantial additions to the Flood Commission's plan. Unfortunately, neither the Rayispolkom chairman nor the chief of the city's Communal Operations Administration, both Commission members, could answer if additional boats had been allocated or if the sale of "swamp" boots had been organized. Nobody in Kursk knew how to get water out of flood basements or when people were to return to their houses. Not a kilogram of the required 25 tons of gasoline and 25 tons of diesel for pump equipment had been allocated.

1986 Harvest in Kursk Oblast

Moscow IZVESTIYA in Russian 16 Aug 86 p 1

[Article by V. Kulagin: "Grain Today and Tomorrow"]

[Excerpt] Kursk Oblast--The grain harvest was completed in 10-12 days on many farms and even in entire rayons. In the first 10 days in August the oblast fulfilled state orders for selling 930,000 tons of grain and the plan for selling strong and high value wheat was overfulfilled by almost 100 percent, even though it was not the easiest of situations.

A. Serebryakov, chief of the Oblast Agroprom Crop Production Department, explained: "This Spring we planted half of the winter wheat crop. Wheat pests caused considerable damage. All the same, oblast yields averaged 23.5 quintals per hectare. Barley yields were 4.4 quintals higher than those of spring wheat."

However, the main grain fields in the oblast are planted to winter wheat. In the past 5 years yields have declined by 1 quintal, which means at the minimum 50,000 fewer tons of wheat. Also, we have been applying 3 times more organic fertilizer and almost twice as much mineral fertilizer to winter wheat. During the 11th Five-Year Plan there was more clean fallow than in the 10th -- 6 times more, almost one-third of the winter crops are planted after peas and annual grasses, and almost as much after corn for green fodder.

All the same, large areas of winter crops are killed by spring. In 1981 almost 129,000 hectares had to be replanted and this year 220,000. What sort of a pattern is this?"

"One can hardly consider it any sort of a pattern," thinks V. Razinkov, chairman of the Kolkhoz imeni Zhdanov in Medvenskiy Rayon. "For 6 years we replanted almost nothing. Even this year we only replanted the field edges. In grain growing it is not a single factor, neither fertilizer, predecessors nor time of field work which is decisive in the final account. The main thing is a system of measures, that is, the totality of all factors."

Viktor Ivanovich took us to a wheat field which averaged 45 quintals per hectare.

"Do you think that we planted this wheat after fallow or peas?" the chairman asked us, "No, we planted it after barley. Of course, it is better not to plant grain after grain. But if need be, it can be done, with special attention."

At the Kolkhoz imeni Zhdanov the system is working without breakdowns. By August 1 the entire area planted to winter crops will be ready and new seeds will be in the ground by September 5.

However, for the oblast as a whole the optimal schedules for planting winter crops are, as a rule, not met.

The reserves for winter crops were especially clear this harvest season. Kursk growers were more organized in preparing the basis for the future harvest. Thus, the first 140,000 hectares of cropland were tilled by nonmoldboard methods. It is planned to plant crops following fallow at better times -- from September 1 to 5. So it is written in work plans.

Seed Improvement in Kursk Oblast

Moscow SELSKAYA ZHIZN in Russian 20 Jan 87 p 1

[Article by A. Trubnikov, SELSKAYA ZHIZN correspondent: "Up to First Class"]

[Text] Kursk--One cannot expect a good breed from bad seed. Kursk growers have properly applied this folk wisdom, preparing conditioned seed for the entire spring planting. By the middle of January about 80 percent of their seed were first class planting standard and the remaining second class.

Farms are striving to bring up all seed to high condition by February 1. They are close to this goal in Belovskiy, Sudzhanskiy, Shchigrovskiy and other rayons. Preparations for seed treatment are being completed, this work ends as warm weather arrives.

Improvement of Seeds

Moscow SELSKAYA ZHIZN in Russian 21 Dec 86 p 1

[Article by I. Mironov: "The Seeds Are Being Improved"]

[Text] Orel--In recent years, many oblast farms have been devoting a great deal of attention to improving the quality of seed grain, in addition to the improvement of land fertility, the application of intensive technology, and the brigade contract. All of this is resulting in improved harvests.

Now that seeds are assured for future fields, specialists are carefully checking preservation and preparation of all resources.

Over 80 percent of seed grain was first and second class of harvest standard by the middle of December. Livenskiy Rayon farms already have over 90 percent first-class seeds. Seed cleaning and calibration of spring crops are being actively conducted in Khotynetskiy, Glazunovskiy, Verkhovskiy, Dmitrovskiy and other rayons.

TIMBER INDUSTRY MANAGEMENT METHODS CRITICIZED

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 23, 24 Mar 87

[Article by Vasiliy Selyunin, economic observer, SOTSIALISTICHESKAYA INDUSTRIYA: "The Ministry: A View from the Lespromkhoz"]

[23 Mar 87 p 2]

[Text] Kirov-Murashi-Moscow-- 1. Paradoxes of Small Concerns

We will investigate a common fact. At USSR Minlesbumprom [Ministry of the Timber, Pulp and Paper and Wood Processing Industry] on 3 September of last year, there was a conference "On Results of Work in August and the September Plan". Minister M. Busygin resolved to fulfill the plan. The chief of Kirovlesprom also announced that his association would get on schedule for hauling timber in three days. The chief of Tyumenlesprom promised to come to his senses the next day. The remaining 6 association managers assured that they would carry out the directive in 4 days.

It is difficult to say if there would be improvements in the fates of association chiefs, if they kept their promises. Suspensions inevitably arise: are there idle ones among us. Were all the conditions present for plan execution and only ministry instructions lacking? This question did not arise. Kirovlesprom, for example, did not get on schedule by 6 September, but only by the 19th.

I assume that the complacency of association chiefs is of no interest. They have long mastered the rules of the game and know that nobody will make promises until the minister receives the necessary assurances. It is more important to understand the position of sector managers. From where does this untroubled belief in the life giving power of directives come?

Exactly a week later N. Savchenko, the deputy minister sent a telegraph to G. Melnikov, Kirovlesprom chief: "Your assurances are not being implemented." It was then explained how to eliminate the disruptions in daily schedules: "Send out the required numbers of workers and equipment."

The Ministry also knows another method of correcting the situation. At the start of the year there was also idle time, but then there was a simple, but

rare bright idea: If logs were also hauled from the forest on days off, then things would move more quickly. In April the Minister telegraphed instructions for this and warned: "I will personally control this." The order was repeatedly duplicated. From August to November sector managers sent out 11 sets of instructions making this the personal responsibility of association chiefs. They were obligated to go out to lespromkhozes [logging units] on sundays and report on successes. The Kirovlesprom gave lespromkhozes similar commands: "See that as much is done on previous days off as on ordinary workdays."

To learn about the results I copied down all the data on Fridays, Sundays and Mondays from daily reports on Kirovlesprom from September through November and then compared work on these days. On the average four times less wood was hauled on these days than on ordinary days. There was no skidding (hauling logs from cutting areas).

Why in this, and other episodes, was no connection made between energetic management actions and the course of affairs? I asked this question to M. Zabolotskiy, from the Murashinskiy Lespromkhoz. In the final account, the entire sector hierarchy exists for the sake of him, the logger. What is good for the Zabolotskiys (alone or in a group) is good for the timber industry. The answer was unexpected. "There was no question about work on days off. It is not worth it." He explained why.

There are 6 people in the brigade, 4 of whom operate various machines. In order to give them a day off on Sunday, it is necessary to have replacements who can operate any machine. There are no such people. If the entire brigade takes a day off, then what sense does it make to work on sundays. Incidentally, even without this the plan is being fulfilled. Since the beginning of December, Zabolotskiy's brigade and its neighbor have been working on the 1987 plan.

After thinking this over thoroughly, I began to respect A. Rozhkin, the Lespromkhoz director. Receiving threatening instructions weekly, he punctually promised to take exhaustive, effective and additional measures and, the very same hour, defended his loggers against the hustle and pestering. In other words, he took the blows himself, so that things would take their normal course. He thus also saved the management (it is known that the best way to wreck a chief is to literally carry out all his orders).

What happens then? A gigantic management machine is churning, the telegraph wires are glowing from a flow of instructions and assurances and sacks full of directives move through the mails. Management signals, just like an electric current, should move through a circuit down to production operations, actuate useful work there and return in the form of reports on what has been done. However, middle and lower level managers shortcircuited the incoming and return lines. The signals were returned to the Ministry in essentially the same form in which they were sent. All energies were exerted to change the words circulating in the circuit: take measures, measures are taken, give to enterprise, it was given to enterprise.

In management theory there is the concept of the self-sufficient system. When an organization assumes management functions beyond its capabilities, the number of administrators grows. Sooner or later it reaches a critical mass and the apparatus begins to work on its own. The upper levels write, the lower ones fill out forms, everything is in order. Real life is ignored, for its only disturbs the well oiled management mechanism. It is sort of like the black holes described by astronomers: clumps of matter in the Universe which reach such incredible density that no signals, even quanta of light, can escape.

There is still nothing new here. The present restructuring is really the third for the Ministry. I wrote about the two previous ones. The first was attempted right after the Ministry's creation in the mid sixties. The economic reform was under way at that time. In spite of its intentions, the Ministry was literally ordered around by enterprises. It was advised to refrain from trifling interference in production. It did not work out.

The second go-round was at the beginning of the seventies -- a new general scheme for sector management was introduced. The idea was to relieve the sector staff from the day-to-day regulation of production, and to transfer this to the middle level elements, industrial associations on cost accounting which were created to replace glavki [main administrations]. However, it was all simply a matter of changing names. One hardly has to prove that Kirovlesprom, as any other association in the sector, is a typical glavka in its worst form -- a point for transferring paperwork up and down. Nothing decisively changed with regards to management methods. Present day paper work textually coincides with that I read 15-20 years ago. Only the dates and signatures are different.

This restructuring could not succeed either. With the recreation of the ministries in 1965 a fundamentally insolvable conflict was embedded in the management mechanism. Under that reform enterprises were given quite extensive rights, but, at the same time, a firm and simple decision was made: the ministries bore all responsibility for providing the national economy with their products. This is the final goal of production. To attain it, every significant aspect of production had to be managed. It turned out that ministries objectively required practically all rights in the sector. The only place to take these was from the enterprises.

So, everything was logical: responsibility for final results was entrusted to the ministries, they also got the rights; the enterprises were left without rights -- they only had to carry out orders.

Many decades of experience shows, however, that the upper and middle echelons of sectoral management are not capable of day-to-day guidance of production. This idea is utopian and in practice a double dose of bureaucraticism. In order for Telegrafniy Prospekt [Ministry headquarters] in Moscow to react to the course of work at lespromkhozes, huge amounts of information have to be gathered in the center. Daily reports alone include 37 items. V. Laletin, deputy director of the computer center at Krasnoyarsklesprom, told the editors that the Ministry "annually approves about 500 indicators on operational reports. Naturally, indicators are multiplied at the association level,

reaching the thousands. Most engineering-technical workers spend half their time preparing information." In a conversation with me V. Barantsev, chief of the production-technical department at the Murashinskiy Lespromkhoz complained: "We protest illegal reporting, but they explain to us, we do not demand reports from you, but information."

What are these mountains of figures good for? Upon finding in them even a miniscule deviation from norms, the Ministry immediately issues a directive. A flow of commands moves counter to the flow of information. The effect has already been stated. The reason for the failure, however, is not that Ministry workers do things wrong. Nothing other than bureaucratic form filling can be done here for the day-to-day regulation of production.

Probably, sector managers will take offence: bureaucraticism is red tape, but here management instantly reacts to each skirmish, issuing precise commands. Be this as it may, I understand bureaucraticism differently: it is the conscientious, punctual performance of management functions which the organ involved cannot perform.

How then is this reflected in restructuring? Is it in the acceleration of paperflows; where 10 papers were written, now it is 12, where commands used to take a week, now they move through the chain in only a day?

Alas! This is not the suggestion. Prior to restructuring the opposite situation was encountered in paperwork: "I compel you in three days..." Now things are more pleasant. For example, on 17 October G. Medvedev, first deputy minister, telegraphed Kirovlesprom: "Only 26 percent of the log hauling roads have been converted to a continuous work week. I compel you to quickly finish the conversion." On 15 May he ordered them to meet the schedule on 14 May.

I assert: it is impossible to improve and restructure day-to-day management from the Ministry. This function must be taken out of its control and transferred downward. Then the sector staff will have to be freed from direct responsibility for supplying customers. Then the Ministry will not have to ride herd over all the clients. The enterprises will have to answer to their partners for deliveries within the contracted time.

Similar ideas have previously been expressed. However, they are usually followed by something like this: The Ministry, freed from trifling day-to-day concerns, can concentrate its efforts on fundamental questions in the sector's development. Is it conceivable, however, to remove one management function without affecting others. We will discuss this in the next article.

[24 Mar 87 p 2]

[Text] 2. Day Laborer or Master?

Many times in my long newspaper career I have tried to grasp the planning of logging, but could not make sense of planning operations. The first step is to determine the national economy's wood requirements. Not simply for wood, but for specific types of products. After all the shaking down and tying up, an assortment plan is approved. It is broken down by lespromkhoz. Long prior to

the plan's approval, local forestry administrations assign cutting areas to loggers. There is not a large selection. One must observe the allowable cut, that is, not cut more timber than is growing.

The assortment plan assigns a logging area to an enterprise. These things cannot coincide, even in exceptional cases. Nature is undisciplined, not growing the trees included in the plan. There are always fewer coniferous species than needed. There is only one way to correct this mistake of nature -- cutting down fir and pine beyond the allowable cut, not thinking about the future. In Kirov Oblast each third or fourth coniferous tree is cut by special authorization. Overcutting will now be even greater.

The consequences are obvious: in 13 out of 26 logging enterprises the resource base is being catastrophically exhausted. For example, not so long ago the Chepetskiy Lespromkhoz was cutting 500,000 cubic meters annually, now the figure has dropped to 160,000. Well built settlements and narrow gage railways will soon have to be moved. However, even this will not save the assortment plan. During January-November Kirovlesprom overfulled the general target for cubic meters while it only met 16 of 32 times in the assortment plan. Deliveries were only 96 percent met. I repeat, this was with huge overcuttings.

These cases were not due to mistakes by the people in charge. One cannot provide anything more than a rational cutting plan. Production programs can be imposed only at enterprises, adapting them to the resource base -- what has grown up in the forest. As the assortment predetermines all remaining indicators (volume, cost, labor), under our variant practically all planning is transferred to enterprises.

Given such a procedure the national economy's requirements will be better met, even though it does not take all details into account. There is really a scarcity of conifers. One-fourth of such timber is shipped by Kirovlesprom in the form of pulpwood (for the paper industry). Since time immemorial there have been discussions about using broadleaved species for pulp, as is done throughout the world. What are these concerns to the ministry? It is all the same to it, and there is pulpwood to spare. If there is planning from below, harsh needs force paper enterprises to adapt to a new raw material.

The solution is even easier. At the Murashinskiy Lespromkhoz I grew fond of chipmaking machines. They produce chips -- papermakers' dream -- from woodwastes. However, only 2 of 3 were working, and those at half capacity. There were not enough low cost hydraulic woodsplitters and operators even for single shift work. Only a very small part of the raw material was used. It will be this way until the lespromkhoz collective becomes solely concerned about implementing the plan at any price. It is of no benefit to them to replace pulpwood by chips, on the contrary, they pay a fine for disrupting the supply of roundwood to papermakers.

I will try to look at the situation in another way: Here is your logging area, get the maximum earnings from it. Pay earnings to the treasury, contribute a little bit to the general needs of the sector, pay costs for equipment, the rest is yours. Divide the remainder for wages, social needs and for expanding

production in any way you wish. You will not have any duties to the state, but the state will not have any duties to you, for unintelligent work.

In addition to its economic advantages, this system entails social consequences. In a flier newspaper at a cutting area near Murashy loggers fervently complain about all sorts of shortcomings and disruptions. In discussions one hears the little word "they". "They" burn chip raw materials, "they" throw away up to 30 percent of the wood at logging sites, "they" bring in summer oil during the winter and now tractors have to be warmed up for hours.

It seems we use the word "they" more than all the remaining personal pronouns taken together. Just who are these bad "they". In the final account, you yourselves dear comrade loggers. A strange type of conscious person has been created. He comments and writes about the powers at be, publishes simple truths, but on the job poorly protects resources. Isn't this because he was trained to be a day worker rather than a master.

I am confident that the sector's restructuring will begin when the ideas involved reach workers, and when they hurry to stop waste not out of any exceptional consciousness, but out of personal, direct material interest. Here is necessary to have independent enterprises turned over to self-management by the collective. It is only under these conditions is there any way to sufficiency, taking everything needed from the forest, using it at least costs and selling it to customers at a profit.

Lespromkhozes are now getting commands to increase deliveries of vitamin meal to animal husbandry. It is hard to imagine that regular workers will throw away their equipment and start grinding up evergreen limbs. Nonworking members of families should be enlisted into this, to the advantage of them and the enterprises. The lespromkhozes still have no excess earnings for this. True, pupils are hauled in for unpaid Saturdays, however, this is simply indulgence. If families are not attracted to such work nobody will be.

However, let us return to the restructuring of management. I have had many hours of disputes with machinery operators about working conditions. Brigades spend almost five hours daily just getting to work. If it is below freezing it takes another two hours warming up machinery. Five hours are left for work. We left the settlement at 6 AM and did not return to 7 PM, washed up, ate supper and it was time for bed in order to arise before dawn. Another work regime was tested in the sector: loggers live for three and a half days in camps, working 12 hours daily, getting in their required 41 hours a week and have half a week free, during which time replacements run the machines. It is more convenient for people and equipment is better utilized.

We talked about this experiment. Far from all operators agreed with me, although, judging from papers, they unanimously voted for it at meetings. One can understand them, twelve hours of work in the cold is no joke. With high speed equipment work has become more productive, more interesting and safer, but hardly easier. It is cold near steel and during the roadless season there is mud up to the navel. I went out there one day to talk a bit, look around and get a feel for it. Something else should be understood: it is one thing

when a logger turns off a Druzhba saw for a day, but quite another to shut down a tractor. The treasury cannot afford to operate powerful machines just seven hours a day. They cost money.

How much, exactly. It turns out that even people who have "worn out" 2-3 tractors in the woods don't know this. The lespromkhoz director, a manager who should know, could not state the price of a tractor, wood splitter or MAZ truck. Why should he know. He has not purchased any nor does he plan to sell any. He simply sends in requests and waits for a reply. The treasury pays and supports everything. Kirovlesprom has a total of 432 nonchoker skidder tractors (the technical fashion). On better days 300 are not used even one shift. However. G. Melnikov, association chief, lightly orders another 350 such machines. It is the same for other equipment. Shouldn't one be ashamed to face the fatherland for this?

It is not hard for the Ministry to substantiate fantastic orders to planners. How, if not through equipment, can logging be increased? It then moves on to higher matters: comprehensive mechanization, technical progress, reequipment. These words thunder in the ears and one does not even catch the reasonable words of economists: why do you need so much equipment? When will you pay for it?

Understandably, sector managers solemnly swear that in the future valuable equipment will not sit idle. About once a week commands arrive: immediately, at least in 2-3 days, introduce 2-3 shift operations at logging operations. Well what if as an exception this is obeyed from "below", what then? Nothing other than a catastrophe. Kirovlesprom overfulfilled the cubic meter plan with one shift work. To haul timber around the clock is to uproot Vyatka forests. Today half of the lespromkhozes have exhausted their raw material base. Is it the other half's turn. Are there such requirements for wood?

Picking up the equipment, the Ministry long ago went beyond the limits at which it was thinkable to use it 2-3 shifts. It turns out that the Ministry is not only incapable of forestalling the squandering of capital investments, it has organized and is organizing this misfortune. Investment policy, at least with regards to operating enterprises, must in no way be left in the hands of the Ministry. This management function must be entrusted to the main production element. Then the collective can start acquiring equipment with its own money, excessive expenditures will quickly reduce residual income and hit everybody in the pockets, then workers themselves, without prompting, can decide what is more profitable, purchasing more tractors, or running the present ones harder.

Take equipment repair. The functionary who now settles accounts for repair is indifferent about work quality. Even state controllers can be duped and persuaded. They are never masters of the machines. The management of repair must be moved downward and converted to a contractual basis. Then perhaps, a lespromkhoz would not only send a tractor operator, but also a bookkeeper to pick up a repaired machine. One would check the quality, the other would guard against overpayment. Of course, mechanics could convincingly refer to difficulties. They would be listened to with interest and even sympathy, but it would end the same: if you can't improve we will get along without you.

Even now, tractor operators spend weeks going over machines returned from repairs.

We have examined four management functions and agree that the most important are: day-to-day guidance, planning, finance and repair organization. There is one conclusion: the Ministry has too inconvenient a place to effectively implement them. In this situation the quality of administrative cadre plays no special role -- send in other people and it would be the same. Restructuring the highest levels using past models will not help here. Only one way out remains: remove the basic management functions from the ministry and give them to enterprises, along with rights and responsibilities. As they say, put the horse in its proper place, before the cart. This, of course, is not all the radical reform we need, but it is a very substantial part.

11574

CSO: 1824/205

PLYWOOD INDUSTRY PROGRESS STILL UNSATISFACTORY

Moscow LESNAYA PROMYSHLENNOST in Russian 12 Mar 87 p 2

[Article by V. Prokhorov, deputy chief of production administration, Wood Panel and Veneer Administration, USSR Minlesbumprom, under the rubric "Returning to Previous Articles": "Barely a Threesome"; referenced article was published in JPRS Report: AGRICULTURE UAG-86-027, 16 Oct 86 p 37; first paragraph is LESNAYA PROMYSHLENNOST introduction]

[Text] Last year our paper published "Examination for Veneer Makers" by V. Prokhorov (LESNAYA PROMYSHLENNOST 17 April 1986). It analyzed work in the subsector, talked about ways of overcoming lagging, tasks in improving technical standards, and product quality. What has changed since then? The editors asked the author to return to this theme.

In analyzing results of 1986 it should be admitted that veneer enterprises are working more effectively than previously. Output increased by 6 percent over 1985 and the veneer production and export delivery plans were fulfilled.

The Bratsk LPK [Forest Products Complex], which had recently been limping, overfulfilled its target by 1,500 cubic meters. The Lakhdenpokhskiy FK [Veneer Combinat] and the Lelenodolskiy FZ [Veneer Plant] in Belorussian SSR Minlesbumprom are now prosperous enterprises.

However, positive advances were not as significant as one would want. As a result, the annual plan for veneer production (in cubic meters) was only fulfilled by 97.5 percent. What and who caused this?

The minuses in the reports were primarily the fault of: the Verkhnesinyachiikhinskiy FK, the Povolzhskiy MFK [Furniture-Veneer Combinat], the Semenovskiy FZ, the Mukhenskiy LK [Complex], the Biysk FSK [not further identified], the Zharkovskiy DOK [Woodworking Combinat], the Odessadrev [Odessa Wood] and Rechitsadrev Associations and the Latvian FPO [Veneer Production Association]. They were prevented from attaining plan indicators by insufficiently qualified personnel, low levels of labor and production discipline and frequent equipment breakdowns. Managers of these enterprises and associations need only complain to themselves. They were not able to mobilize collectives to fulfill the tasks, even though the necessary conditions were present.

There are considerable unutilized reserves in the subsector. We often talk about them to plant and combinat specialists, attempting to direct them to these potentials for increasing production efficiency, but it goes slowly.

Therefore, it now makes sense to return to the same theme. If these problems are not solved we can never end the lagging.

I will begin with raw materials. One often hears complaints about lack of wood and how this often disrupts plans. What can one say? Actually, in the fourth quarter loggers failed to deliver 300,000 cubic meters of peeler logs for veneer. Enterprises in Latvia, the Ukraine and Belorussia were on lean rations. Equipment sat idle for shifts and days at the largest combinats in these associations: Soyuzfanspichprom [All-Union Veneer and Match Industry], Yugmebel [Southern Furniture], Sevzapmebel [North-West Furniture]. In our view, this could be avoided if lespromkhozes [logging units] in the sector would plan to fulfill 92-95 percent of their annual targets by 1 October. Then the period of roadlessness would not take them inawares.

In short, there are still raw material difficulties. Veneer workers should be more careful about such materials. In actuality, one most often sees occasional waste. Here is a basic truth: With the onset of warm weather it is necessary to sprinkle peelers, so that they do not "suffocate". Where there is no water storage capability, the butts of logs should be covered with protective coatings and storage periods carefully observed. Who does this? Practically nobody. Much is lost. Using this method, last year the Orzhevskiy DOK managed to save 22,000 cubic meters of wood. Thanks to this it was the only enterprise in the Ukraine to fulfill its veneer plan. It is an example worthy of imitation.

Sometimes veneer enterprise managers are irresponsible about hauling out floated peelers. Thus, at the beginning of October at the Kostroma and Manturovskiy FK there were still several tens of thousands of cubic meters of peelers left in the water. As a result neither kombinat worked at full capacity during the fourth quarter. We punished managers in both Soyuzfanspichprom enterprises for this. But, reprimands are only reprimands. Meanwhile, customers failed to receive 3,000 cubic meters of veneer. It would be good if this story were to be an example for all.

Many specialists still react coolly to the careful use of peelers. I will again refer to experience at the Orzhevskiy DOK. Here they have a precise bulk and unit accounting for logs supplied to veneer lathes. Reject material is put in order and again returns to the shop. This assures work stability.

Again and again it is necessary to mention lack of stability in veneer enterprise activities. As a rule, about 23 percent of the monthly target is met in the first 10 days of the month. Storming begins after the 20th. This habit is rooted even in those collectives which successfully handle their plans: the Krasniy Yakor FK, the Talinin FMK and the Parfinskiy FK. These "not days" result in deterioration in product quality. To get to the point, this is shown by state acceptance at the Zheshartskiy and Perm FK's, the Seletskiy DOK, and the Bratsk LPK Association.

I want to especially dwell on the use of new technology. This question should become the subject for serious discussions at party meetings of communists at veneer plants. The state finds foreign exchange to buy equipment from abroad, and it then sits idle in our shops. All because of our lack of urgency.

Here is an example. For many years now, two imported veneer lathes and driers have been sitting idle at the Ust-Izhorskiy Veneer Combinat. They dry veneer in strips, which, compared to the presently used sheet method, increases labor productivity 1.5-2 fold and saves raw materials. Initially specialists referred to the lack of spare parts. This problem was solved. Then they began to talk about the ineffectiveness of this technology. Finally, Finnish engineers arrived, fixed the equipment and proved its efficiency.

Similar lines are now used at the Bratsk LPK. Everything was fine there as soon as the equipment was repaired properly and on time and changes were made in payments for brigades' labor. If only A. Chudovskiy, chief of the VPO Sevzapmebel and V. Yelovskiy, director of the Ust-Izhorskiy FK would have done this rather than look for excuses!

The full returns were not obtained from imported veneer lathes at the Kostroma FK, the Lvov and Kiev FZ's. Finnish built crushers for processing cracked veneer are not working at the Biysk FSK and the Zharkovskiy DOK. The reasons -- engineering errors at the enterprises.

In general, the use of imported technology requires serious discussions at labor collectives. The same applies to the other unutilized reserves for increasing production efficiency. Veneer enterprise workers are capable of ending this lagging, making up for shortcomings, getting on schedule and working smoothly.

11574

CSO: 1824/207

FORESTRY MANAGEMENT COST ACCOUNTING BENEFITS UNDERESTIMATED

Moscow LESNAYA PROMYSHLENNOST in Russian 10 Mar 87 p 2

[Article by L. Ovchinnikov, candidate of economic sciences: "What is Hindering Cost Accounting [khozraschet]?"]

[Text] Perhaps because forestry has too long been on the sidetracks of the main line for improvements in the economy, the irreversibility of changes are felt here especially acutely and not without pain. It is clear, however, that the recent massive losses of trees, deterioration in forest stands and exploitative forest use in a number of regions require taking basic measures. The publication of the Draft for the Law on State Enterprises has brought us near to solving questions of leskhoz [state forestry unit] activities under conditions of full cost accounting and self-financing.

The problem is made more complicated by there not being the needed scientific reserve for the forest economy's practical restructuring. There have not even been experiments in this direction. Far from all scientists and specialists are convinced of the advisability and even the possibility of cost accounting organization for forestry production operations.

Up until now, scientific publications and newspaper articles have most frequently considered the financing of forestry from the state budget as a benefit guaranting protection from any sort of chance. But what kind of chance? From leskhoz being left without resources for their very existence if their work results are bad. This is the underpinning for a unique "theoretical base". In this view, forestry activities do not satisfy the present generation, but future ones. It takes many decades for a forest to grow. Outlays for planting trees will not be recovered until a new generation of trees is cut down. Taking the "time factor" into consideration, how can one talk about "self-support" [samookupayemost] and "self-financing"?

There are, naturally, quite a few scholars and specialists who feel that cost accounting and self-financing are necessary in forestry. This position is in response to contemporary requirements for restructuring the economy, which, as is known, touch upon all sectors.

In brief, their reasoning is reduced to the following. The main activity of forestry is reproducing forests and improving their productivity. This basic

requirement upon forestry is fixed in forest legislation. The reproduction of forest resources consumed by other sectors in the national economy and by the public is supported by various reforestation measures. Consequently, forestry satisfies current forest use requirements. If this is so, then outlays can and should be covered not by society in general, from its national income in the form of nonreturnable budget allocations (as now), but by the resources of enterprises using the forests. After all, the full reproduction of forests and the assurance of sustained yield forest use is embodied in legislation. This is the basis for self-support and self-financing.

The Draft defines a production enterprise as a commodity producer. If one views the productive activity of leskhozoes not as the growing of forests, but as their reproduction (and this is how it is characterized by forest legislation), then reproduced forests ready for use should be considered their commercial output. Reproduced, not grown forests. It can take 100 and more years to grow a tree, while, in a regular forestry unit, reproduction is supported annually.

In order to make forestry a commodity producer it is necessary to give all the resources it reproduces prices which completely cover reproduction costs (including a definite profit). Incidentally, forest taxes do not meet this requirement, and some reproduced forest products are given away absolutely free. Measures to protect and strengthen the useful natural qualities of forests should also, as a rule, be implemented with resources from specific forest users -- agriculture, water resources and others. This is completely in accordance with with the Draft to the Law on Enterprises. Monetary resources for conducting forestry operations should also accumulated through these resources. The principle of self-support is realized here through the dependence of forestry expenditures upon income.

It is important to stress that the development of commercial-money relations between forestry and other sectors (replacing budget financing) does not weaken, but, on the contrary, strengthens the general economic basis for this sector.

The organization of full cost accounting for forest enterprises is more complicated. This is because of the unique legal situation of leskhozoes and the historical disproportion between forest use and forest production.

One condition for full cost accounting and self-financing has always been that the customer pay for the product (work or service). The product of forest production is reproduced forest resources, for example, mature trees on the stump. However, while in the Ukraine 2-3 hectares of new forest are planted for each hectare cut, in the European North it is 10 fold less. In other words a process of expanded reproduction of forests used is under way in the Ukraine, while in the North their regeneration is not assured. For the country as a whole the production and use of forests is approximately balanced. This can be the basis for the self-support and self-financing of the entire sector.

This also means that loggers in the North should partially pay for growing forests in the Ukraine, something which is possible only by creating a

centralized monetary fund and distributing it to forest enterprises which do not have sufficient incomes.

As the sales of forest products does not compensate for the outlays of each individual enterprise, enterprise cost accounting is possible only on the basis of selling forestry work itself, not the product.

How can this work be sold? In other words, who is the customer? Now it is the leskhoz itself. However, the legal statute for leskhoz is such that they act in two capacities: On the one hand as organs for the state management of forests in their territories and, on the other, as production enterprises. Thus, the director, as a representative of the state, signs an order giving himself the right to use a forest. Doesn't this dual (and obviously abnormal) situation for leskhoz contain the reason for many shortcomings in forestry?

In our country forests are exclusively state property. This means that operations can be conducted only at the state's will and in its interests. The question naturally arises: shouldn't there be a division of functions between state management and economic activities in forests? Then everything would immediately fall into its place. Deprived of its production functions, the leskhoz-forest owner (its name should be thought about) could act as a client-customer for forestry work, while the leskhoz-enterprise would act as a contractor performing work under economic contract with the customer.

A necessary condition for state receivers is that completed work and forestry projects meet normative requirements for quality. Payment is made at accounting prices. If it is based upon the scheme we suggest the organization of cost accounting for forestry activities presents no difficulties. Scientists at VNIILM [All-Union Scientific Research Institute for Forest Industry Mechanization] have made the appropriate recommendations which are now being reviewed.

It must be noted that a state order should contain a list and volumes of final projects (saplings) than individual work. It is the leskhoz's work to create such saplings, either through natural or artificial regeneration. Now there are often cases of enterprises planning to plant trees where reforestation would be better assured through the protection of regrowth. The planning of results rather than activities gives leskhoz the right to determine methods for attaining them, strengthens collectives' responsibility for work results and their material interest in conducting operations economically. All this is in the spirit and letter of the new Law.

The separation of production and management functions in forestry will make possible radical improvements in state control over forest use and reproduction, something which is now clearly lacking. The creation of comprehensive enterprises will be accelerated under these conditions.

11574
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PROFITABILITY OF MOSCOW'S COOPERATIVE CAFE DISCUSSED

PM041041 [Editorial Report] Moscow IZVESTIYA in Russian 1 May 1987 Morning Edition carries on page 3 a 2,500-word article by Elrad Parkhomosvkiy under the heading "Law of Low Numbers" on the operation of Moscow's first cooperative cafe in Kropotkinskaya Street. The article begins by denying rumors that the cafe usually runs out of meat, that foreign journalists and diplomats are allowed in without waiting in line or booking in advance, and that the militia have been called to the cafe. Parkhomovskiy then reports an interview with the cooperative chairman, A. Fedorov, who explains that prices at the cafe are higher than at state enterprises because the cooperative has to buy raw materials at higher prices and that "unprofitability for use would be simply bankruptcy" but asserts that a customer can spend the entire evening there for the price of a cup of coffee. However, Fedorov continues, the cafe plans to open a cheaper self-service section and to organize the sale of "mini-luncheons" from a trailer at popular leisure points in the summer. Although the cafe does not serve alcohol, "we cannot complain of our income. It now fully covers the payment of the tax to the state, the repayment of loans for equipment, construction, and appliances, and the wages of the cooperative members and those working under a labor agreement." Fedorov considers the cooperative's main problem to be finding sources for raw materials and believes that cooperative catering enterprises should create their own auxiliary farms.

The article then cites the opinions of various officials, including Yu. Luzhkov, first deputy chairman of the Moscow Gorispolkom, who agrees with the idea of creating auxiliary farms, and V. Ivanov, director of the USSR Academy of sciences Sociological Research institute, who claims that although "on the social plane public opinion does not accept as fair the large incomes in the sphere of individual and cooperative labor" the mail received after a television program about the cafe shows that "80 percent of the authors of letters support new forms of labor activity."

Finally Parkhomovskiy argues that because the cafe is unique its faults are being used as an argument against cooperative catering in general. The Moscow gorispolkom is planning a further 40 cooperative catering points this year, but "will this not be a control figure which will be considered sufficient? There should be just as many of these 'points' as life itself produces," he believes. Pointing out that as of 1 July the wages of workers at state public catering enterprises will depend on these enterprises' income, thus creating further competition for cooperative cafes, Parkhomovskiy argues that further consideration must be given to ways of increasing the profitability of the cooperative cafe.

ESTONIAN EXPERIMENT IN EVERYDAY SERVICES DESCRIBED

Moscow PRAVDA in Russian 13 Feb 87 p 3

[Article by V. Shirokov, PRAVDA correspondent under the rubric "The Social Sphere: Man and Anxiety": "His Own Business"; first paragraph is PRAVDA introduction]

[Text] Tallin--For about 2 years the Estonian SSR Ministry of Consumer Services has been conducting an experiment aimed at improving the quality of work in the service system, expanding the assortment of services, and developing workers' initiative and undertaking at its enterprises. Today we are discussing the essence of this experiment, which now forms part of the new conditions of management, and its economic and social potential.

Beauty Salon

Correspondents of western agencies and of big and small journals and newspapers appeared unexpectedly at a small basement on Rataskaevu Street in Old Tallin. For almost 3 hours they exhausted hairdresser Yuriy Troshin with tricky questions: Is he not a private entrepreneur? Is his salon not the first redoubt of revived capitalism? Is its appearance not a sign that Soviet society is stooping to the principles of Western business?

They went away extremely distressed and disappointed: They did not succeed in profiting from their "scoop." The young Tallin "businessman" explained clearly and unequivocally that he and his colleagues worked at a socialist enterprise, that is, the Yunor Consumer Service Combine, to which, basically, the implements of production belonged, and that there was no exploitation of man by man at the hairdressing salon. Consequently, there was not even a smack of capitalism there.

Let us look into this basement. Taking several steps down, one finds himself in a comfortable room. A luster of mirrors, wall sconces, vases with flowers in original woven hangings, and a television set--everything is homey and conducive to rest. To be sure, this is how it should be--this is a ladies' salon and a visit to a hairdressing salon is always an event, a kind of holiday, for women.

However, an original interior is not an amazing thing in Tallin. Why then did Western journalists come precisely there? Apparently, first of all, because Yuriy Troshin has "his own business," more accurately, a family business: He works here with his wife Svetlana and with their partner Irina Lavrinenko. They have concluded an agreement with the Yunor Combine according to the so-called second contractual form. The part of the proceeds delivered to the enterprise is determined accurately and all the rest goes for their wages.

It would seem that this is as simple as an apple pie: Deliver what has been prescribed to the state and the rest is for you. However, the republic Ministry of Consumer Services did not arrive right away at this simplicity of mutual settlements between the worker and the enterprise. The rapprochement in positions was dictated by life. The service sphere needed restructuring, which could ensure a sharp spurt in the improvement in services.

Yuriy Troshin explains his part of the road as follows:

"We used to work in an ordinary salon. We wanted very much to reorganize many things according to our taste. Moreover, I and Sveta have four children and we needed a free schedule in order to get them ready for school and kindergarten in the mornings. We had to rush to the hairdressing salon at the crack of dawn, although it is well known that there are no clients early in the morning. Loiter in the salon, but be there. Moreover, family needs demanded bigger earnings."

Two years ago Yuriy looked closely at this neglected boiler room. He came to an agreement with the enterprise, made the rounds of many administrative offices, and obtained, although with difficulty, a permit for reconstructing this basement. He called his brother and friends and they took crowbars, shovels, and a handbarrow in their hands and began working. More than 1 month passed before the premises took on the features of a dwelling--they worked on this during their free time. They also had to invest their own money in order to buy the necessary materials and to prepare comfortable work places.

Did it make sense to expend so much effort? It did. Troshin calculated that the expenses would be recovered, even if not in 1 year. The hopes were justified. The salon became very popular. Telephone appointments are now accepted 2 weeks in advance, and in spring and summer, 1 month. The fact that Irina Lavrinenko, their colleague, is a designer of high-style hairdos, a winner of all-Union and foreign competitions of hairdressers, and a member of the country's scratch team, also contributes to the basement's fame.

Earnings also increased owing to the efficient utilization of the work time, which they can now "extend"--work as much as necessary so that not a single client has complaints and leaves distressed.

And now about the part of the road traversed by the Yunor Consumer Service Combine. K. Lekhtmet, Yunor director, and R. Martin, his deputy, told me:

"We faced the task of increasing the number of services for the public, of improving their quality, and of raising workers' labor productivity. The

contract helps us to accomplish it successfully. Last year workers under contract--we already have more than 100--performed services, on the average, worth 500 rubles more than did experts in ordinary hairdressing salons. The average profitability at the enterprise made up 12.6 percent and of those under contract, 29.1 percent. For the time being, 9.3 percent of the workers have been transferred to the contract, accounting for 10.4 percent of the total volume of services. However, the chief thing is that complaints have disappeared as by magic."

Deducting a certain part of their earnings, workers under contract pay for the cost of materials, fuel, and electric power, the rent for the premises, the depreciation of equipment, shop and general production expenses, proceeds into social insurance and into the leave fund, trade-union dues, amounts of prescribed taxes, expenses on advertisement, and so forth. These sums are determined on the basis of calculated wages and the plan. People distribute everything that remains among themselves.

"Banana" Rule

The manager of one of the biggest foreign firms had a rule, which he followed strictly. If a worker came to him with a worthwhile idea, he immediately received a reward. One day an employee dropped in late in the evening and expressed a brilliant idea. The boss grabbed his wallet, but did not have money with him. His glance fell on a banana, which was accidentally on the table. He solemnly offered it to his visitor: Whatever the reward, it was given immediately. The "Golden Banana" badge in a buttonhole on a lapel is now considered one of the highest distinctions in this firm...

Yu. Sillaste, candidate of economic sciences, director of the Estonian Affiliate of the Scientific Research Institute of Labor, told this story. It should be understood as follows: The working man should know accurately how much he will receive for high-quality, efficient, "intelligent" labor. However, we have standards and rates, which determine the amount of earnings more or less accurately, and there are bonuses for savings and, finally, cost accounting. Why should matters be complicated unnecessarily?

"All this is so," Yu. Sillaste agreed. "However, the point is that cost accounting often operates on paper. In order to introduce it properly, constant control is necessary. With the great number of our shops this is not within the powers of even the most inflated auditing staff. What to do so that the worker himself efficiently calculates all the expenditures on the performed service? We have decided that the balance approach to wage formation can be successful here. From proceeds in "live" rubles make all the prescribed payments and divide the balance in your collective according to the quality and quantity of labor invested by everyone."

People are great economists: Workers under contract in the system of the republic Ministry of Consumer Services immediately lowered the expenditure of materials by 20 percent. Previously, when the plan was fulfilled, labor productivity declined at the end of the month, but now there is no reason for this. The more you do, the higher your personal labor income. Everything is taken into account: Expenses on fuel, power, transport, and maintenance of

technical personnel. Incidentally, Troshin's salon now does not have a cleaning woman, a cloakroom attendant, or a cashier--they do everything themselves. They do not even need a director now.

Crooks Flew Away

I heard in a trolley bus: "Yes, they rake in thousands there." Such a narrow-minded rumor has spread in the city. Let envious persons calm down about the countless thousands. S. Ovchinnikova, an acceptance clerk at a boot shop in the Vyayke-Yysmyae microrayon, told me:

"Three bootmakers, a patcher, and I, an acceptance clerk, work in our shop. I will not make secret of the fact that during some months we can also have losses, but, on the average, we still earn 40 to 50 rubles more than earlier. However, the moral benefit is more valuable. We are no longer shaken once more by checks and there is no point in hiding from our fellow workers the ruble that comes rolling in from an order 'on the side.' Yes, we simply don't have such rubles. All the rubles are honest and all are earned with our own hands. When there is an influx of orders, we can stay in the evening and come on a day-off."

They began to think about the client. They now accept any footwear in order not to make a person run to the other end of the city. If necessary, they buy laces, zippers, and polyethylene packs in a store--everything so that the client will again come to them next time.

Low-level cost accounting and applied economics have made foremen change their attitude toward the quality of work. At the television shop on Tammsaare brigade leader I. Maler and section foreman K. Semenets explained to me in understandable terms:

"Today the expert 'will tap' the entire television set from top to bottom and replace potentially weak units and tubes just so that the set does not come back to him during the warranty period. Otherwise, a 'repetition' free of charge will weigh upon him! The hack worker will be kept only until the first 'puncture'--the brigade will call him to account right away."

In addition, such an approach also stimulates an improvement in skills and in craftsmanship. For above-plan work 70 percent of the wages go to the machine operator and only 30 percent, to the brigade's fund. From the same point of view the brigade council examines the specialist's "profitability" for the collective. As the foremen expressed themselves vividly: "The crooks flew away..." Conscientious and responsible people, who see their profit in honest work, have remained.

The "second contractual form" gives a real possibility of solving in large measure a complex social problem, that is, pulling the service sphere up to the level of the population's needs. Within the consumer service system it also makes it possible to flexibly react to demand. For example, "spare players," that is, workers not on the permanent staff, who are enlisted in work depending on the load, have appeared in some television shops. The Ekspress Consumer Service Combine has voluntary taxi-drivers, on whose private

cars boards with "checkers" and the inscription "express taxi" hang. They can work during their free time, deducting the appropriate share of the proceeds to the enterprise. Workers under contract can beautifully wrap a gift for you, make an individual greeting card, and repair a car, or a sewing machine at home...

Of course, Estonian versions of this flexible service model are possible. The fact that more than 1,600 people already work according to contracts speaks for itself.

The skeptic will ask: "So, everything is smooth now?" Of course, not. Estonia's residents could present a long list of complaints and suggestions to the consumer service as a whole. Moreover, the "second contractual form" is not a panacea for all the ailments of the service sphere. Workers under contract have many problems. Shoemakers are short of high-grade leather (the Narva Leather Combine disappoints them), hairdressers, of high-quality tools and perfumery products, and machine operators, of spare parts. The "lack of interface" of the Labor Law Code with the Law on the Labor Collective, when sometimes it is very complicated to get rid of a person known to be a crook, or a slipshod worker, is disturbing. However, all this can be overcome. As the saying goes, it is a matter of time. The basic thing has been clarified: It seems that our service is capable of properly meeting people's requests and needs. Only the "key" to it must be found.

11439

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MINE-REPAIR FORECASTING METHODS OUTLINED

Kiev UGOL UKRAINY in Russian No 1, Jan 87 pp 27-30

[Article by A. F. Borzykh, candidate of technical sciences (KGMI) [not further identified], Ye. N. Bogatko, engineer (KGMI), and A. N. Khudyakov, engineer (Rovenkiantratsit Association): "Forecasting Repair Costs of Preparatory Works"]

[Text] The deepening of mining operations because of increasing displacements of rock walls in preparatory works requires additional expenditures for maintenance, which necessitates sound forecasting of them. At six mines continually being deepened in the Rovenkiantratsit Association research has been conducted on forecasting repair costs for preparatory works. (Table 1). Since preparatory seam works that are joined to those being worked are most subject to the impact of overburden pressure and amount on the average to 92 percent by length of the mines examined, funds for repair and maintenance go primarily to these works.

The mines are working gently sloping seams 0.8-1.6 m thick, and produce about 75 percent of the anthracite in the association. In the period analyzed (1972-1984) depth of works at certain mines increased by 100-250 m, for an average of 150 m for the association, the volume of repair operations for preparatory works increased by 17.5 km (22.8 percent), and the costs of carrying them out increased by 454,300 rubles (49.2 percent). Repair costs per meter of works increased from 15.16 to 17.57 rubles and the monthly labor productivity of repair personnel increased from 6.8 to 10.3 meters.

From the depth one can trace the general growth trend in the volume of operations to repair works, the cost of performing them, and the proportion of works with an unsatisfactory cross section, although this regularity is not observed in some mines. Average annual repair costs per meter of works are different for each mine at the same depth of works. Therefore, the amount of work and the unit repair costs depend on a combination of factors that reflect mining and geological conditions and the effectiveness of technical measures for the maintenance of works and timberwork. The loss of sectional area at the time of investigation because of rock displacements along the contour can serve as the resultant indicator that represents the impact of geomechanical processes on the works. From this the degree of impact of overburden pressure

on preparatory works per annum is reflected in the amount of rock wall forced into the area being maintained, which corresponds to the volume of roof rock and earth excavated during repair of works, which means to the cost of those operations. The impact of depth on the conditions of maintaining seam works and on the volume of repair operations with the combined effect of other factors can be expressed by the conventional comparative indicator p , and serving for this is the magnitude of annual costs of repairing works that applies to a specific portion of depth of works and relates to total coal mining costs for the mine, that is:

$$p = 100C_p (1 + w) / (HC), \quad (1)$$

where 100 is the initial adopted depth of the mine, in meters;
 C_p is the annual repair costs of maintained preparatory works, in rubles;
 w is the proportion of preparatory works by length with an unsatisfactory cross section at the end of the year;
 H is the average actual depth of works per mine at the end of the year, in meters; and
 C is total coal mining costs per year, including costs for repairs, support, and tunneling preparatory works, in rubles.

Despite some improvement in the labor productivity of workers repairing works, the magnitude p for each of the association's mines for the period investigated fluctuated slightly (Table 2). This confirms that the indicator p mainly reflects the degree of difficulty of maintaining works and it can be used as the base to estimate predicted repair costs as depth increases.

The best conditions for maintaining preparatory works are at the Mine imeni Frunze, where $p=0.0003$, that is, an order of magnitude lower than at the other mines. The value shown for p is related to the lack of change in the investigative period in the method of supporting works by pillars and to the absence of major achievements to improve the level of mechanizing operations to repair works. The slight fluctuations in p from year to year are mainly explained by some changes in the labor productivity of repair workers and to increase in the sectional area S of works with the depth and length of maintained works that were supported by arched metal props instead of wood. Sectional area and type of prop have a substantial impact on the unit costs of repairing works. For example, in 1980 51.5 percent of the works at the Mine imeni Dzerzhinskiy were supported with arched props and average repair costs were 16.43 rubles per meter, while at the Mine imeni Vakhrushev (p is lower by a factor of 1.8 than at the Mine imeni Dzerzhinskiy) where 30.3 percent of the works were so supported, costs equalled 51.51 rubles, i.e., greater by approximately a factor of 3, while the labor productivity of repair workers was lower by only a factor of 2.

To estimate the impact of the duration of operation of the maintained works against repair costs we can use an indicator that reflects the average duration of the period to replenish the preparatory works fund:

$$t_{\phi} = L/L_n \quad (2)$$

where L and L_n are the average annual duration respectively of maintained and tunneled preparatory works at a mine, in meters.

The period t_{ϕ} for the association's mines fluctuates between considerable limits (3.9-12.8 years), but for a given mine it does not vary much.

Sectional area during tunneling also has an impact on repair costs per meter of preparatory works. With an increasing sectional area of works their unit repair costs decrease with depth of mining operations (Table 3). In this connection the increase of the sectional area of works with depth should be regarded as one of the measures to reduce their maintenance costs.

Obtained from statistical treatment of the data is the relationship of unit costs per cubic meter of excavating rock c_n to sectional area S of preparatory seam works:

$$c_n = 21.88 - 2.23 S + 0.08 S^2 \quad (3)$$

The statistical features (a correlation ratio of 0.48 and a reliability index of 5.7) indicate the closeness of the link sufficiently for practical purposes.

When establishing the optimum sectional area of a working being tunneled (from the standpoint of reducing maintenance costs) one must begin mainly from the conditions for loss of their sectional area during the period of operation. Losses can be most precisely expressed by their absolute magnitude, but for this one must know the change of sections over time in relation to the operational life of the working. It is very difficult to obtain this information for a mine. The problem can be solved in general terms by comparing the costs per cubic meter of excavating rock, when other conditions are equal.

Analysis of data on the cost of excavating a cubic meter of rock when repairing preparatory works has revealed that the cost depends mainly on the degree of mechanization of excavating and mucking operations. After statistical treatment the relationship is obtained between the costs of excavating a cubic meter of rock during retimbering without means of mechanization and sectional area S of the working being repaired during tunneling:

$$c_k = 12.85 + 0.275 S \quad (4)$$

The coefficient of correlation is 0.41 and the reliability index is 2.8.

By comparing, with the aid of the coefficient of proportionality $\kappa_n = c_n/c_k$ the costs per cubic meter of excavating rock one can determine the economically desirable sectional area of preparatory works (Figure 1). Under the conditions investigated this amounts to approximately 14m^2 for the minimum coeffi-

cient $k_n=0.31$. Its magnitude reflects the change in the costs of repairing works in relation to their initial sectional area, which should be selected not only from the operating specifications designated but also with consideration for future repair costs.

Statistical analysis has established that the proportion of costs for the excavation of bedrock d_n increases with depth (Figure 2). The conditions of maintaining preparatory works during repairs vary with the factor of "proportion of costs of excavating bedrock." Costs in the association per cubic meter of excavating rock are less by a factor of 1.9 when excavating earth than when retimbering. This is because earth excavating operations are mechanized to a greater degree than retimbering. Repair costs for works when they are being deepened must then be adjusted by the coefficient for their reduction:

$$\kappa_c = 1 - 0,53 d_n. \quad (5)$$

It is obvious that the repair costs of preparatory works depend on a number of factors that are collectively reflected in the indicator p . When using Formula (1), when w equals 0 and 2.5, and the coefficients of proportionality k_n and of the proportion of costs d_n of excavating bedrock during the repair of preparatory works as adjusted magnitudes, depending on the sectional area of the works being tunneled and their depth, the expected annual repair costs of seam works being maintained can be calculated from the formula

$$C_p = \frac{pH}{100 - pH} (C_a + C_o + c_k L S k_n / t_\phi) (1 - 0,53 d_n), \quad (6)$$

where C_a and C_o are the annual costs of mining coal and of shoring up preparatory works, not including the costs of tunneling and repairing the works, in rubles.

If the new methods of shoring up preparatory works are being used and their share is more than 20 percent of the total length of the works being maintained in the mine annually, to improve the accuracy of the forecast, the indicator p must be adjusted every five years. We calculate the probable costs of repairing preparatory works in the Rovenkiantratsit Association for 1990, from the following expected initial data: $H=740$ m, $S=13$ m², $L=440,000$ m, and $C_a+C_o=120$ million rubles. From Table 2 we find $p=0.0025$, and $t_\phi=6.2$ years. From Figure 1 for $S=13$ m², the coefficient of proportionality $k_n=0.39$ and the costs of excavating one meter of rock without means of excavation $C_k=16.3$ rubles. For $H=740$ m the share of costs to excavate bedrock $d_n=0.37$ (Figure 2). Then, annual repair costs $C_p=1.897$ million rubles.

The same calculations may be carried out for each mine investigated to forecast costs of repairing works and then comparing the total magnitude with the estimate for the association. Estimated costs for repairing works were compared with actual costs for 1984 in order to check the reliability of the

forecast. The deviation for each mine was within the limits of the actual scatter of p for the association -- 3.2 percent, which demonstrates the feasibility of employing the formula derived to forecast annual repair costs for preparatory works at anthracite mines being deepened.

Table 1.

1 Шахта, шахтоуправ- ление	2 Глубина разработки, м Мощность пласта, м				3 Протяженность отремонтированных выработок, тыс. м Доля отремонтированных выработок, (по протяженности), %				4 Затраты на ремонт выработок, тыс. руб. Удельные затраты на ремонт 1 м выработок, руб.			
	1972	1976	1980	1984	1972	1976	1980	1984	1972	1976	1980	1984
Им. Дзер- жинского	760	810	840	880	38,2	28,4	34,5	30,7	456,0	387,0	567,0	609,8
Им. Фрунзе	1,19	1,02	1,14	1,0	45,2	35,4	41,0	33,0	11,94	13,63	16,43	19,86
Им. Вахру- шева	420	530	600	670	3,6	4,0	12,7	20,1	10,9	18,0	29,8	46,0
Им. Космо- навтов	1,01	1,2	1,08	1,17	5,5	6,3	19,1	24,0	3,03	4,5	2,35	2,29
«Ровеньков- ское»	570	650	670	670	4,6	4,5	4,5	3,6	228,1	229,3	231,8	218,0
Объедине- ние Ровень- киантрацит	1,52	1,56	1,18	1,04	11,4	9,6	8,4	6,3	49,58	50,96	51,51	60,56
	490	590	690	720	5,3	5,7	5,6	10,9	130,4	150,5	104,0	268,0
	1,2	1,23	1,0	1,2	13,8	11,6	8,2	14,1	24,6	26,4	18,58	24,59
	430	480	550	530	9,2	7,8	6,2	13,1	97,7	103,2	115,9	235,6
	0,82	0,87	0,89	0,9	7,5	7,2	5,8	9,1	10,62	13,23	18,69	17,98
	540	610	670	690	60,9	50,4	63,5	78,4	923,1	888,0	1048,5	1377,4
	1,15	1,18	1,2	1,14	18,2	14,4	16,7	18,2	15,16	17,62	16,5	17,57

Key:

1. Mine and mine administration
2. Depth of working, in meters
Thickness of seam, in meters
3. Length of works under repair, in thousand meters
Percent of works under repair, by length
4. Costs of repairing works, in thousand rubles
Cost per meter of repairing works, in rubles
5. Imeni Dzerzhinskiy
6. Imeni Frunze
7. Imeni Vakhrushev
8. Imeni Kosmonavty
9. Rovenkovskoye
10. Rovenkiantratsit Association

Table 2

1 Шахта, шахто- управление	Период обновле- ния фон- да подго- товитель- ных вы- работок, 2 лет	3 Производительность труда рабочих по ремонту выработок на шахте, м/мес				4 Величина p				5 Средняя за 1972-1984 гг.
		1972	1976	1980	1984	1972	1976	1980	1984	
6 Им. Дзержин- ского	12,8	10,2	8,7	8,3	10,1	0,0056	0,0037	0,0055	0,004	0,0047
7 Им. Фрунзе	5,2	3,2	3,4	9,8	14,3	0,0036	0,00030	0,00024	0,00030	0,0003
8 Им. Вахру- шева	6,8	4,0	4,9	4,8	3,3	0,0056	0,0040	0,0035	0,0020	0,0036
9 Им. Космонав- тов	3,9	5,7	5,7	8,6	11,5	0,0030	0,0022	0,0012	0,0022	0,0022
10 «Ровеньков- ское»	7,6	4,1	5,8	6,8	10,1	0,0016	0,0014	0,0016	0,0019	0,0016
11 Объединение Ровенькиант- ратсит	6,2	6,8	6,4	8,5	10,3	0,0032	0,0023	0,0023	0,0021	0,0025

Key:

1. Mine and mine administration
2. Restoration period for preparatory works fund, in years
3. Labor productivity of workers repairing mine works, in meters per month
4. Magnitude of p
5. Average for 1972-1984
6. Imeni Dzerzhinskiy
7. Imeni Frunze
8. Imeni Vakhrushev
9. Imeni Kosmonavty
10. Rovenkovskoye
11. Rovenkiantratsit Association

Table 3.

Шахта	Глубина разработки, м					Удельные затраты на ремонт 1 м подготовительных выработок, руб.				
	Площадь сечения подготовительных выработок исчету, м ²									
	1974	1976	1978	1980	1982	1972	1976	1978	1980	1982
Им. Фрунзе	450	530	570	600	650	4,28	4,5	1,78	2,35	2,53
Им. Космонав- тов	9,1	8,8	13,2	12,2	11,5	27,1	26,4	22,4	18,6	22,9
	550	590	660	690	720					
	7,1	8,4	9,1	10,1	10,1					

Key:

1. Mine
2. Depth of working, in meters
3. Internal sectional area of workings, in square meters
4. Costs per meter of repairing preparatory works, in rubles
5. Imeni Frunze
6. Imeni Kosmonavty

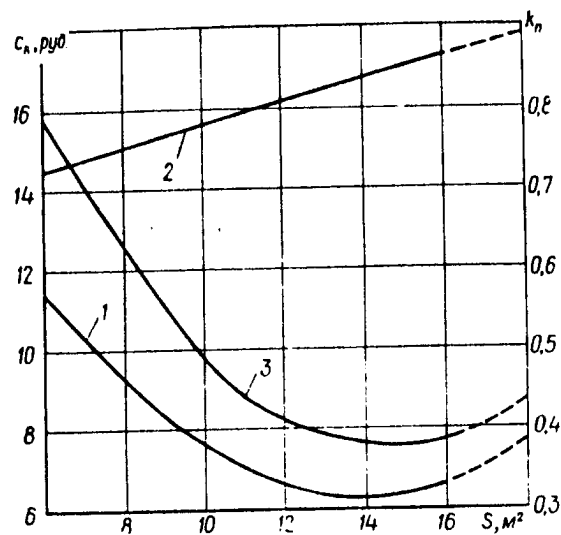


Figure 1. Relationship of cost c_k of excavating 1 m³ of bedrock during the tunneling (Curve 1) and retimbering (2) of preparatory works and its sectional area S and the coefficient of proportionality k_n the magnitudes shown (3).

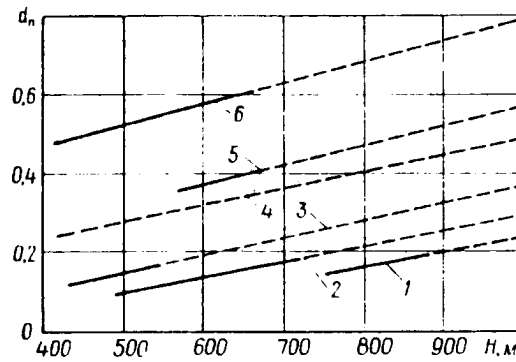


Figure 2. Relationship of proportion d_n costs of excavating bedrock when repairing preparatory works and depth H of the working: 1, 2, 5, and 6 are for the mines imeni Dzerzhinskiy, imeni Frunze, imeni Vakhrushev, and imeni Kosmonavty; 3 for the Rovenkovskoye Mine Administration; and 4 for the association. Solid lines are actual values and broken lines are forecast values.

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TENGIZ OIL, KARACHAGANSK GAS FIELD GROWTH

Alma-Ata NARODNOYE KHOZYAYSTVO KAZAKHSTANA in Russian No 12, Dec 86 pp 8-12

[Article by A. Kulibayev, first secretary, Guryev Obkom, Kazakhstan CP, under the "Based On a Line From the Decisions of the 27th CPSU Congress" rubric: "Stepping Up the Pace of Field Development"]

[Text] "To accelerate development of the Tengiz Oil Field and the Karachagansk Gas-Condensate Field".--(From the Basic Directions for the USSR's Economic and Social Development for 1986-1990 and for the Period up to the Year 2000).

Last year was an eventful one for the residents of the Guryev Oblast. In the wake of the party congress, this period was characterized by a particular charge of energy and dynamism in the economy and life of the Caspian region. This is attested to by the extent to which the oblast has developed in recent months. The work is being done more efficiently and with better quality, and the rates of public production have increased. The ten-months' plan for sales of industrial output was overfulfilled. Labor productivity has increased, and prime production costs have been reduced. Profits have increased. Positive advances have been noted in the work of the construction, transport and communications workers. However we can never allow ourselves to be satisfied by what we have accomplished to date. The profound qualitative changes needed to bolster the trend towards acceleration have not yet come about.

The growth now underway in a sector which is so vitally important and which has such nationwide significance as the petroleum industry is naturally the source of a great deal of concern. The immediate development of the Tengiz Field is considered one of the most important tasks mentioned in the Basic Directions for the Economic and Social Development of the USSR for 1986-1990.

In order to reinforce the leadership of the efforts underway to develop this field, the Party Obkom has set up a commission to help accelerate the construction and putting into operation of the Tengiz Oil and Gas Complex facilities. With USSR Gosplan's help, a scientific and technical conference was held to discuss the problematical questions of speeding up the region's development. The Tengizneftegaz and Prikaspiyskburneft production associations and the Prikaspiyskneftegazstroy [Caspian Sea Region Oil and Gas Enterprise Construction] and Kulsaryneftestroy [Kulsary Oil Field Construction] trusts

were set up very quickly. Both union-level trusts as well as workers and specialists from fraternal socialist countries were brought in to help do the construction work. Key sections were complemented by trained leading workers.

The coordinated working group set up by the Party obkom, which maintains contacts with the ministries and departments, can help solve many vitally important problems. There can be no hesitation: we need to complete R1 billion in construction and installation jobs during this five-year plan period alone. We also have about a million square m of housing space to build, enough schooling places for 4,000 pupils, preschools for 3,880 children, hospitals, trade and public catering enterprises and other social, cultural and domestic services facilities.

Since just last year, this oil-bearing region has been transformed into a vast construction area. In accordance with the directive schedule, we are building construction industry bases, duty-shift and workers' settlements, water, oil and gas pipelines, motor vehicle roads and rail lines and stations. Work is being completed on construction of a house-building combine, and shops which will produce drywall compound and expanded-clay lightweight concrete products. Solutions are being found to household-related and public catering problems, and municipal services are being provided for the construction workers. In just the last few months the water supply for the Embinskiy Rayon has been doubled, and the provision of trade and domestic services to the population has been improved.

The Prikaspiyskneftegazstroy Trust is constructing housing for its own workers ahead of schedule. The Kulsaryneftestroy Trust has started building one-flat apartment houses and dormitory facilities. Tenements are being built in Kulsary's first microrayon. Work has started on a great many commercial and domestic projects, fruit and vegetable storage and cold storage facilities.

Work is proceeding along a wide front. However, a critical examination of the implementation of the program for developing the Caspian Oil and Gas Complex shows that there have not only been advances but that there are also serious shortcomings and oversights.

Thus, while the Prikaspiyskneftegazstroy Trust fulfilled the plan for construction and installation jobs by 141 percent overall, planned volumes were not completed at seven projects (including the imported equipment storage facility, engineering service lines and the roads within the construction area), which were to have been put into operation this year.

The Kulsaryneftestroy Trust has also fallen behind schedule in building housing and communal facilities, schools for 1,176 students and vegetable storage facilities. Little of the labor here is mechanized. We are always feeling acute shortages of the pipe, precast ferroconcrete, millwork, lumber, construction equipment and mechanisms, and transport vehicles with which the trust is being insufficiently supplied by KaSSR Minstroy, and which is the reason construction of the intra-block mains for Kulsary's first microrayon has not yet begun. Many of the apartment houses which have been erected have no windows, doors or flooring.

Efforts to install heating, gas-supply, sewage and electric power supply lines are going badly in the duty-shift settlements in Kulsary and Tengiz. The level of engineering preparation of the projects and the quality of the work being done is poor. What's more there remains a great deal of unfinished work, and this is increasing.

A number of complaints have been lodged with the directors of the Santekhmontazh [Sanitary and Technical Equipment Installation], Kazkhimelektromontazh and Kazgazstroyontazh trusts, whose subdivisions are not meeting their targets for supplying power and gas to the residential sector.

The results of these efforts are not comforting. In 1986, some 35,000 square m of living space needed to be made available in Kulsary alone. But this volume is not being met, either by the Kaztyazhstroy [Kazakh SSR Heavy Construction] Trust or Kustanaytyazhstroy's [Kustanay Heavy Construction] trusts' subdivisions. How then, one asks, are we to bring the work force, which is so undermanned here, up to full strength?

The construction of 48,000 square m of living space in Guryev and Kulsary, which USSR Minenergy subdivisions were to have built during 1986-1990, is in jeopardy. A year has passed, and the special mechanized column has not been organized, the apartment house series has not been decided upon and no planning estimates have even been made.

The poor state of the roads is causing serious difficulties. KaSSR Minavtodor [Ministry of Highways] should take vigorous steps to improve them.

The blame for the present situation vis-a-vis construction of industrial and civil projects lies not only at the door of the contractors. The general client--the Tengizneftegaz Production Association--who cut back on the amount of construction done by its own works department, is also to blame. As we see it, the association's directors have failed to come to grips with the fact that they are in charge of this construction project.

This association's specialists and officials have been too slow in solving the problems which have cropped up. The upshot is that the builders do not receive their planning estimates, equipment and electrical cable products on time. The lack of coordinated project planning on the part of the client causes work to have to be done over, and losses of time and funds.

Late deliveries of equipment and materials are also slowing down the implementation of the construction program. This is delaying construction of the power and service lines and transformer substations for the industrial base and the microrayons.

We are also concerned by the extremely slow pace of work on the Astrakhan Kulsary Aqueduct. In 10 months of 1986 only a little more than half of the year's plan was fulfilled. At this rate this vitally important artery may not be put into operation next year. This is why USSR Minnefteprom and Minneftegazstroy must make the utmost effort to speed work on this project.

Headlong growth in power engineering is indispensable to successfully carrying out the tasks facing us. A number of power bridges joining Guryev with future consumers have already been constructed, and the power nets within the oil and gas field are now under construction. However, construction and the putting onstream of the substations on these lines are far behind their targets. Nor will USSR Minenergo's Glavvostokelektroselstroy [Main Eastern Administration of Rural Power Construction] get these substations into operation next year. This will delay the transmission of 220 kV along the new power lines.

Construction of a number of substations in the Tengiz Field has been postponed for an indeterminate period of time, because the Tengizneftegaz and Prikaspiyburneft production associations have not yet drawn up the design specifications.

Another of the most important (albeit behind schedule) of the complex's projects is the 4th phase of the Guryevskaya TETs [Heat and Electric Power Station], which is being constructed by the Sredazenergostroy [Central Asian Trust for Power Construction].

The situation with regard to the construction of a number of construction industry and industrial construction materials facilities and housing projects, which also happen to be right in the oblast center, is no better. The residential construction funds allocated to the prime contractor--the Guryevneftekhimstroy Trust--are far from being fully utilized. The Uralsk and Rudny house-building combines are not meeting their targets by and large. Instead of its assigned four apartment houses, the Alma-Ata DSK [House Building Combine] built only one.

We urgently need a base from which to control technical industrial batching and an expanded clay gravel shop, however there is a shortage of construction industry personnel at these projects, and the Guryevneftekhimstroy Trust's work is also far behind schedule. The problem of equipment deliveries for the house-building combine now being built was not solved on time. Meanwhile, it is precisely the putting of this facility into operation which could have solved the residential construction problem in Guryev and in the oblast.

We have taken a number of steps to enliven affairs at the construction projects. We monitor the progress of the construction of the facilities daily, and are seeing that there are adequate manpower resources, equipment and materials. But we have not made up for the ground we lost in 1986. Consequently, the plans keep getting more and more stepped up over the long term.

The rate at which the region develops depends in large part on the state of affairs in exploratory- and development-well drilling. But at present, there is not enough efficient interaction between the drilling, rig-building, backfilling, repair, transport and supply services. Poor production methods and labor discipline are leading to down-time amounting to 40 percent of the scheduled working time for our drilling rigs. The accident rate is high.

The Prikaspiyburneft Association's development well drilling operations are getting underway slowly. For now, all the hole is being made using workers of only a single field crew from the Archedinsk Drilling Operations Administration, and the plan for 1986 makes up...a bit more than 1 percent of the five-year plan target.

The Caspian Drilling Operations Administration is drilling exploratory wells in other fields, and at extremely slow rates. For the association as a whole, tens of thousands of meters of penetration have been "lost" since the beginning of the year because of organizational reasons. Only some individual drilling crews are fulfilling their plans and obligations. Prospectors from the Guryevneftegazgeologiya Association are also behind in data for the oil workers. The efficiency and quality of oil and gas exploration operations remain extremely poor. Well construction is being started without the needed construction of the exploration area field facilities, poor solutions are being found to problems of production and technical servicing, the geological services are allowing mistakes in their calculations, reconciling themselves to disruptions of the drilling schedule, and drilling rigs are standing idle for long periods.

There have been a number of complaints about the work done by the Guryev Geophysical Expedition and the Embaneftgeofizika Trust, who were supposed to supply the drilling organizations with a stock of structures ready for drilling.

Along with the search for new reserves, the main problem now is that of increasing the amount of oil recovered from the formations. A vast amount of experience has been accumulated in domestic practice, but it has not yet become assimilated by our oil workers. They are using the new physicochemical and thermal recovery methods in extremely limited fashion. This involves the carrying out of a series of pilot experimental operations in the Makat Field, and is causing delays in the recovery of high-viscosity oils from the Karsak Field.

The Kulsaryneft Oil and Gas Recovery Administration has outlined concrete measures to enhance formation flooding. But efforts to renovate the system for maintaining formation pressure are proceeding slowly. The plan to inject water into formations has been disrupted both throughout the administration as well as throughout the entire Tengizneftegaz Association. This has caused an oil shortage of tens of thousands of tons.

One reserve for fortifying the oil recovery raw materials base consists in developing the previously explored fields of the above-salt complex found in areas of operating oil fields.

Oil recovery levels can be increased very quickly as well by making better use of our wells. Meanwhile, the number of non-working wells in the Embaneft and Tengizneftegaz associations is far in excess of the norm.

The Embaneft Association collective is faced with the task of working seriously to stabilize oil recovery levels by using intensive methods to develop active fields and put new fields into commercial operation.

Oil treatment procedures should be improved as well. In order to do this, we need to make better use of our operating treatment plants, improve the production discipline of our maintenance personnel and get serious about dealing with the problems of renovating obsolete equipment.

The scientific research institutions and designing organizations have been shouldered with the terrific responsibility of finding prompt solutions to the problems of developing the Caspian Oil and Gas Complex. However, the recommendation made by the scientists affiliated with KazNIGRI [Kazakh Scientific-Research Geological Exploration Institute] are too general, and are thus of very little use to the practical field experts.

The experimental and methodical group formed here has been at work for over ten years. A great deal of money has been spent on it, yet no return has been seen on this investment. To date, this group doesn't have a single recommendation for geophysical operations procedures on record as having been introduced into production. The obkom investigated the reasons for this scientific institution's operating in neutral gear and had to make the institute's directors strictly responsible for this inactivity.

Nothing noticeable has been done to solve urgent problems related to the drilling, recovery and transport of oil and gas on the part of the KaSSR Academy of Sciences Institute of the Chemistry of Petroleum and Natural Salts. It is working up a total of four developmental subjects for the Embaneft Association and Guryevneftegazgeologiya. But these few developments will, for the second year, not reach the stage of laboratory research.

What's more, this institute concealed the most flagrant violations of the procedure for estimating the economic effectiveness of its scientific developments. Essentially, the institution management has chosen the path of deceiving and defrauding the state. It particularly encouraged research which was not called for in the plan and work done which had no relation whatsoever to the subject or direction being followed by the institute's scientific research. It came to a point where petrochemical scientists were inventing microphones, ichthyological traps and spark plugs at a time when there were still unsolved problems in oil recovery. Today, measures have been outlined for reorganizing the work being done here and for strengthening its ties with industrial enterprises.

The KazNIPIneft [Kazakh Scientific Research and Planning Institute for the Oil Industry] collective still has a lot of room for improvement in the quality of its planning estimates, in bringing growth to geological scientific research and field development, and increasing the amount of oil recovered from the formations under development by the Embaneft Association.

Development of the Tengiz Field puts many new problems at the top of the agenda. However, they are being solved very slowly. Today, for example, the Guryev Oil Refinery's managers are still in the dark about specific methods of refining sulfur-bearing crude. Nothing is being done, even to bring oil in.

The Guryev chemical and machine-building plants are being renovated, but at an intolerably slow pace. The progress of the work underway at these enterprises has now been put under the special supervision of the party obkom and gorkom.

Shipments of freight and passengers associated with the development of the Tengiz Oil Field are increasing every day. But the problem of improving passenger transport is now becoming acute. In particular, the decision to construct a new terminal in Kulsary has been dragged out.

Rail cars are spending a lot of time standing idle on the Kulsary station sidings. This situation is the result of poorly developed siding management on the part of the enterprises and organizations. The USSR Ministry of Railways and the Guryev Division of the West Kazakhstan Railroad are taking too much time in developing railroad networks on a number of sections and the Makat, Kulsary and Guryev stations. A great deal of work has been postponed and the situation is becoming more complicated. And the freight flow increases daily.

There is a great deal of validity to workers' complaints about employees of the motor vehicle administration and the aviation enterprises, who are to blame for the disruptions in transporting passengers to their workplaces.

Effective administration of industry and construction over a vast territory is inconceivable without reliable communications, which we do not yet have. Telephones have not been installed at most of the facilities now under construction, and there are not enough links to handle international communications. The problem of constructing new telephone exchanges has not yet been solved. Rediffusion nets have not been put in operation yet, and this lack is felt most sorely in the duty-shift settlements. This cannot be considered normal. The oblast is awaiting emergency help from the republican Ministry of Communications.

The fast-paced development of industry in the region has engendered a tremendous labor force influx. Concerns are mounting with regard to organizing the feeding, the provision of personal services and cultural leisure-time pursuits for the population. In order to solve these problems, there are plans to set up camel-breeding farms and special-purpose sovkhoses to produce vegetable and melon crops and meat and milk products. There are also plans to build a calf-house and a 15,000 square m greenhouse, a slaughterhouse, a sausage-making shop and a dairy plant. However the oblast agriculture industry has shown no strategic thinking in these matters. It is time for KaSSR Gosagroprom [State Agroindustrial Committee] to help.

A vegetable storage facility, a bakery and dining rooms are being put into operation, but there are still a great many complaints. How graphically this shows how much more needs to be done, and quickly, to improve trade and public catering. The oblast needs to put stores equipped with refrigerators and commercial equipment such as cash registers, warehouses and storerooms into operation. And of course commercial and public catering experts need to be trained ahead of time.

The domestic services network now in service does not yet meet present-day needs. There are not enough dry cleaning establishments, no laundries and very few specialists capable of repairing complex household appliances.

The medical services need to be improved from the ground up. The preventive treatment centers in Kulsary and the duty-shift settlements are not providing the population with daily high-quality medical aid. Many diagnostic research and preventive measures are not being implemented because of the shortage of medical stations and mobile treatment units.

Among the many problems associated with developing this region, that of manpower is still most important. The acute shortage of workers and specialists can be felt everywhere. Very few are coming in from outside. But the use of outside workers is only one way to solve the problem. The need is long overdue to set up an efficient system for training them, as well as for raising the skill levels of the local work-force. Help is particularly needed in industrial trade education. The academic materials base in a number of vocational-technical schools is not up to the demands made on it, nor is the teaching and educational process at the requisite level. The majority of workers who graduate from these schools do not work in their specialty. It is time to put a stop to this practice.

Training of the Tengizneftegaz Association workers who are supposed to develop the oil and gas complex is behind schedule. There are too few workers sent to allied enterprises for their probationary period.

The socialist competition to fulfill the tasks associated with developing the Tengiz Complex ahead of schedule is developing poorly. The superficial approach to this important matter is still evident in some places. In a number of instances obligations having no economic justification are being taken on, the labor competition is receiving no publicity and its results are not being totalled up.

Growing problems have forced us to pay more attention to selecting and placing the labor force, and in considering their level of competence and their businesslike attitude. We are giving the Soviets, the trade unions and the Komsomol organizations a greater part in production and domestic matters. But, as the saying goes, we can't do it all. A construction project associated with developing an oil region is considered vitally important, but meanwhile not a single Komsomol Youth detachment has come out here.

We have new tasks and working methods on the agenda. We have to make a major effort to teach our directors to be in command in a situation of expanded democracy, and to develop initiative on the part of the masses. It is difficult, but success only comes by going to people, keeping them informed and telling them what has been done, and advising them on how to go about solving their technical, economic and social problems.

We are entering into the second year of the 12th Five-Year Plan period with some concern about accelerating the work we have begun. We need to make up for everything not completed during this waning year. And an even more intense program lies ahead. In 1987, the rate of progress of our construction

work on the Tengiz Oil and Gas Field needs to be greatly increased. It is high time we fulfilled the plan for getting housing, schools and preschools ready for use and fulfilled the plan for erecting production, social and municipal facilities.

Everything we have outlined can be accomplished if solutions are found soon to the problems of setting up additional production capacities and consolidating our construction subdivisions, which problems we have set before the following republican bodies: Gosstroy [State Committee for Construction Affairs], Minstroy [Ministry of Construction], Minmontazhspetsstroy [Ministry of Installation and Special Construction Work], Goskorgaz [State Committee on Gasification] and other concerned ministries and departments.

On-schedule construction of the Tengiz Field facilities comprises the leading edge of our work. We have a lot to do, but we need to deal with these tasks without delay and in coordinated fashion, exactly as called for in the directive documents.

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KARAGANDAugOL EXTRACTION GROWTH NOTED

Alma-Ata NARODNOYE KHOZAYSTVO KAZAKHSTANA in Russian No 12, Dec 86 p 45

[Article by R. Karenov, assistant professor, Karaganda Polytechnical Institute, and candidate of economical sciences: "Let's Not Repeat Previous Mistakes"]

[Text] Practice convincingly supports the notion that any increase in coal extraction and any improvement in the technical and economic indicators of the Karaganda Basin coal enterprises depend directly on the rates at which our mine stock is renovated, rebuilt and retooled. The output of 10 mines, the renovation of which was completed during 1975-1985, increased from 10.5 million t to 15.1 million t. As a result, the number of low-output enterprises having an annual coal output of within 1.5 million t was reduced from 40 to 10 percent.

As comparative analysis shows, labor productivity at renovated mines is 1.5 fold higher than at newly constructed mines, and the yield on the capital is almost 2-fold higher.

At the same time, we should mention that it is only at every other of the basin's mine that any significant amount of renovation work has been completed. At five of the mines also categorized as renovated, new horizons have been prepared, in order to maintain previous coal extraction levels.

The above preparation at the imeni 50th Anniversary of the October Revolution, the imeni 50th Anniversary of the USSR and the imeni V. I. Lenin mines took from 9 to 19 years. The prolongation of these operations was reflected not only in a worsening of the manner in which fixed productive capital was used, but also in the effectiveness of the workable planning decisions, which were coordinated with the calendar plan for growth in mining operations, and which were to be implemented within 3-4 years.

The doubtful authenticity or inadequacy of the geological data throughout the mine field has caused planning decisions to be reexamined and led to additional work. The planning decisions did not sufficiently improve the plans for opening seams and taking coal from the mine fields, nor did they define the best technical and production parameters for individual production links.

This is also why there was a reduction in the labor-intensive plans which called for developing inclined mine working. These plans embodied a great deal of disconnectedness in the drifts, workings which were too long, staged transport lines and complicated ventilation schemes.

There have been flaws in the financing and organization of construction and installation jobs. It turns out that the funds allocated for renovation were disbursed among a great many projects.

As a result, the growth rates for quantities of coal taken at these mines was lower than called for in the plan, and the timetables for developing these capacities were not met. This meant that planned labor productivity levels were not attained, nor were cutbacks managed in the number of workers needed to extract coal.

An integrated mine-renovation program, estimated to take 15 years, has now been developed by the Karagandaugol Association. It is important that previous mistakes not be repeated, that we keep the program's primary aims in sight and that the most important tasks be singled out during the implementation of the program.

For the purposes of improving the effectiveness of these renovations, we need to ensure that the capital investments and material resources are allocated in strict compliance with the planned calendar time-table. The quality and authenticity of the geological exploration work in the coal fields should be improved and the approved geological reports should be given over to the planning institutes some 3-4 years prior to beginning to renovate the mines.

The mines' production capacities should be increased by concentrating mining operations and constructing new capital horizons, by reducing stepping in all types of subsurface transport and making it more reliable by putting in new conveyer lines and hoist engines, by increasing skip capacities and by converting ore hoists over to coal operation.

We need to improve ventilation conditions in the mines by replacing our ventilators with more powerful units and by putting decontamination plants into operation promptly. These measures should be implemented first of all in the Promyshlennyy and Saran section mines. Almost all the coal enterprises are being required to renovate their ore chains and to build railroad coal hoppers and coal storage facilities.

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DEMOGRAPHIC PROBLEMS, FUTURE PLANNING EFFORTS SURVEYED

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 2, Feb 87 pp 58-66

[Article by T. V. Ryabushkin, corresponding member of the USSR Academy of Sciences: "Urgent Demographic Research Problems"]

[Text] Demographic Science and Demographic Policy

Today population problems acquire special social and economic significance and demographic policy becomes an ever more important part of social policy. The social and economic tasks set in the new edition of the CPSU Program and "Basic Directions in the Economic and Social Development of the USSR for 1986-1990 and for the Period Until the Year 2000" require even greater attention to demographic problems.

Soviet scientists have done a great deal for developing the principles of the Marxist-Leninist population theory, at the same time, following the fundamental directions of K. Marx, F. Engels, and V. I. Lenin and generalizing the experience in the study of tendencies in the population movement in capitalist and socialist society. Major social and economic changes in our country have also given rise to many new problems, which have been intensively worked out in recent years.

Soviet demographers pay the closest attention to the theoretical substantiation of the goals and methods of demographic policy in the USSR. In the practice of demographic analysis modern methods of researching tendencies in the birth rate, mortality, and migration are utilized widely and censuses and special population surveys giving detailed information for refining demographic forecasts are held. Much attention is paid to the criticism of bourgeois demographic concepts. The point of view of Soviet demographers on the decisive role of social and economic factors in demographic development received general recognition at the sessions of the World Population Conference in 1974 and 1984.

During the past 15 years Soviet demographers have conducted many specific investigations. As a result, some basic concepts concerning the optimal reproduction of the population and labor resources in the USSR have been formulated. They substantiate the need for an optimal policy of reproducing

the population and labor resources in the Union republics and basic economic regions of the USSR (in particular, in Siberia and the Far East); further major steps for ensuring more favorable living and working conditions for mothers; a set of measures aimed at preventing the further increase in a number of diseases, controlling traumatism, and prolonging the average life span; measures for the further rationalization of migratory processes.

In the last few years factors affecting the birth rate, primarily regional birth rate characteristics, ethnical differences in the birth rate, and the marriage rate problem have been widely investigated, conclusions on an inevitable slowdown in the growth of the number of workers and on the stabilization of the population's employment level have been drawn, and the need for taking into account workers' demographic structure in order to increase the efficiency of their labor has been shown. Ways of the population's efficient employment with due regard for the characteristics of formation and utilization of labor resources throughout the country's territory have also been studied. The research results have been utilized during the development of an overall program for scientific and technical progress and its social and economic consequences in our country until the year 2000.

Principles of optimal Soviet economic planning are investigated in a number of studies by Soviet economists. Unfortunately, thus far the population category, essentially, has not been organically included in the system of concepts and categories describing the optimal planning mechanism. Meanwhile, without an analysis of the population as a source of formation of society's main productive force--manpower--and as the main consumer of produced physical assets and services it is impossible to represent such a system in the right way.

Today the technique of forecasting the size and structure of the population is worked out to a sufficient degree. For such forecasting in the USSR there is a sufficient initial base--population census materials. Forecasts also take into consideration the possible change in indices of births and deaths.

Population processes were almost the first group of social and economic processes, for the study of which mathematical methods began to be used. The forecasting model itself in its modern form based on the life table was also developed quite a long time ago. However, the use of computers introduced a fundamentally new factor--the possibility for multivariant calculations with due regard for preset parameters--into demographic calculations and forecasting.

Unfortunately, we do not have at our disposal mathematical-analytic methods expressing the interconnection of demographic and other social and economic patterns. A model making it possible to trace (of course, approximately and on the average) the effect of a number of factors on the birth rate level has not yet been developed. Many problems of forecasting the demographic behavior have been studied poorly (not only from the mathematical aspect, but from other aspects as well).

It should be noted that the qualitative aspects of a number of demographic patterns have not yet been investigated sufficiently. For example, it is necessary to examine at greater length the possible effect on demographic processes of the decline in mortality from a number of diseases and of the movement of mortality from these diseases to later age groups. The important problem concerning long-term calculations of the population on smaller territories has not yet been solved in practice.

A number of studies, especially of a publicistic nature, illuminating the characteristics of population reproduction in the USSR stress only the negative aspects of the reproduction process (for example, the rapid decline in the birth rate in individual regions). In our opinion, the systems approach should be applied to the complicated and in a number of cases contradictory demographic situation. Only then is it possible to uncover not only negative, but also positive, tendencies in population reproduction and to define new problems connected with the transition of the Soviet economy to the modern stage of development, when criteria of efficiency, intensiveness, and quality become determining for all the aspects of social and economic life.

The level of modern research does not yet make it possible to uncover the precise measure of interaction between demographic and social and economic processes and, in particular, the measure of effect of individual social and economic factors on a certain change in the population. The extraordinary complexity of the processes of social life and the contradictory, differently directed effect of the same factors under different historically formed social and economic conditions are the basic reasons for this. However, we can right now establish with full confidence not merely parallelism in the course of social and economic phenomena, on the one hand, and of changes in the population, on the other, as two independently developing components of the historical process, but also the determining role of social and economic relations. Unfortunately, one often encounters the attempt, when approaching specific demographic situations and, consequently, the proposed measures of demographic policy, to limit oneself to the examination of merely the external connections of different factors, or to a one-sided explanation of created situations. For example, the process of the rapid natural population growth in developing countries after World War II is often explained only by the use of modern medicinal substances preventing mortality from a number of threatening diseases in the past. At the same time, however, the fact that advances in public health and the mass application of the latest achievements in medicine themselves would have been impossible without major social and economic transformations in the modern world is overlooked consciously or unconsciously.

Recognition of the dominating role of social and economic relations does not at all signify any exaggeration of the importance of demographic factors proper. Conversely, such a recognition makes it possible to more correctly evaluate all the methods and indicators connected with the study of the population and labor resources and to work out maximally adequate forecasts, programs, and long-term plans for social and economic development. The significance of demographic problems for social policy and planning is also determined in the light of what has been stated.

It is well known that the demographic behavior of every individual or family is not the object of state planning or regulation. Nevertheless, on the whole, changes in the population can be regulated to a certain degree and demographic behavior can nevertheless be controlled to a certain extent. This makes it possible to raise the question of the development and implementation of demographic policy--activity directed at improving the demographic situation in the country. In turn, such a definition of policy presupposes the singling out of such concepts as "goals of demographic policy" and the "demographic optimum."

First of all, we would like to note that the goals of demographic policy cannot be examined separately from the goals of society's social-economic, cultural, and political development, although they have their definite specific nature. To be sure, even in countries with different social-economic and political conditions demographic policy can have many common aspects connected, for example, with an increase or decrease in the birth rate. However, the social and economic conditions of socialist society appropriately determine the specific nature of both the goals of such a policy and of the methods of implementing it. We will explain this, using a specific example.

Women's active involvement in social and production activity is one of the reasons for the decline in the birth rate in our country. At the same time, participation in production contributes to an all-around development of personality and to an expansion of its horizons and, therefore, we do not have the right to raise the question of women's return to the family only because this would contribute to an increase in the birth rate. Another example. It is well known that in the republics of Central Asia and Kazakhstan the birth rate is extremely high and the aim to have a large number of children in the family dominates among the bulk of the population. It would seem that, if there were only the question of increasing the birth rate in our country, the demographic situation in these republics would have been exemplary in a sense. However, in these republics the indicators of women's involvement in production and social activity are low, but infantile mortality is somewhat higher than in the European part of the USSR. Furthermore, authoritarian relations between husbands and wives are observed in some families to this day. It seems that under the conditions of socialist society demographic policy should take into consideration not only population reproduction tasks, but also a number of others connected, in particular, with the development of the woman's personality, mutual relations in the family, children's health, and conditions of their education. All these problems should be solved in an overall manner with due regard for the complex interconnections among them.

Problems of Optimization of Demographic Processes in the USSR

In what direction is it necessary to affect the change in the population? What are the goals of demographic policy as applied to the conditions in the Soviet Union? We believe that social and economic measures implemented by state and public organizations should be aimed at ensuring the reproduction and moderate growth of the population in all Union republics and the country's economic regions and at improving its structure and qualitative indicators, especially such as manpower skills.

The idea of "zero population growth," which has found ardent supporters in the United States and other highly developed capitalist countries in recent years, from our point of view, is unacceptable for the Soviet Union. An expanded population reproduction in the USSR, especially in republics with a low birth rate, is necessitated by the entire present social and economic situation, in particular, by the demand for manpower. The development of the country's north-eastern regions with their vast natural resources requires the enlistment of additional labor resources. Meanwhile, regions which previously were traditional suppliers of manpower will themselves experience its shortage in the future. However, the population of republics where a high growth of labor resources continues is not very mobile. The further social and economic development of a number of the country's regions still requires assistance by skilled personnel from regions possessing a higher economic, scientific, and cultural potential.

Soviet demographers and sociologists have never considered rapid population growth rates dangerous for social development as a whole. No state measures to limit the birth rate are needed. The very course of social and historical development inevitably leads to its decline. A comparative analysis of population tendencies over a long period shows a decline in the birth rate level almost in all the country's regions, although this decline occurs at different rates--for example, much more slowly in the Uzbek SSR and more rapidly in the RSFSR, the Ukrainian SSR, and the Georgian SSR. The birth rate in Azerbaijan, Kazakhstan, and Armenia has dropped during the last decade. For example, in 1965 the general coefficient of births was 36.6 in Azerbaijan, that is, it was one of the highest among other republics (even higher than in Uzbekistan), but in 1983 it dropped to 26.2 (throughout the country, 20.1). These and other data indicate quite eloquently that industrialization and urbanization processes, women's further involvement in public production, and an increase in demands on the education of the young generation in themselves bring about a drop in the birth rate.

An acceleration of qualitative changes in the structure of all workers engaged in public production, for example, a rise in the educational level, is also of considerable importance. The larger the young generation, the higher the share of the highly educated population prepared for the demands of modern production. Finally, the population's intensive aging connected with the decline in the birth rate over a long-term period leads to negative consequences in society's social development, including its scientific potential, culture, and nature of relations among society's members.

Basic directions in demographic policy are organically combined with measures to improve workers' well-being and should be closely coordinated with problems of utilizing labor resources efficiently and ensuring full employment. In connection with this the following question arises: Is the statute on expanded population reproduction not in variance with the patterns of a systematic increase in the population's need for physical and cultural assets? In principle, the optimal planning and functioning of the socialist economy and observance of the necessary national economic proportions also demand an optimal population reproduction policy. However, it is not yet possible to

give any accurate quantitative expression of such a policy. One can only talk about the qualitative characteristic of demographic policy in the form formulated by us above.

The demographic situation in various regions of such a vast multinational country as the Soviet Union, naturally, is formed differently. However, there is also a general pattern in the population movement, which determines both the general task of demographic policy and measures of a particular nature implemented in individual regions. The general pattern in the dynamics of change in the population's quantitative and qualitative composition for all regions in the Soviet Union lies in the transition from an extensive to an intensive type of its reproduction, when the number of children in a family decreases, but the demands on their training, education, and preparation for future participation in socially useful labor increase. In various republics this transition is made at different rates and with certain modifications.

Major social and economic transformations occurring in our country and measures to raise the population's standard of living have already led to positive changes in the population's structure and tendencies, which has been reflected, in particular, in an increase in the average life span, sharp decline in infantile mortality, elimination of a number of diseases, and significant rise in the population's educational level and in the skills of manpower. At the same time, in some of the country's regions the consequences of the war, increase in women's employment in public production, certain deterioration in the habitat, and other reasons have led to a number of negative demographic phenomena, among which a rise in the coefficient of mortality among the male population of the able-bodied age and a decline in the birth rate level should be noted primarily. A slowdown in the growth of labor resources is expected in a number of the country's regions in the future. Negative demographic tendencies also include migration flows not corresponding to the principles of an efficient distribution of the country's productive forces and tasks concerning the development of new regions with rich raw material and power resources.

Elimination of the indicated negative tendencies requires an optimal demographic policy, which in the most general outline can develop in the following directions: striving to prolong man's life span and to preserve his work fitness for a maximally long period; combining women's participation in national labor with their retention of the functions of motherhood; strengthening the family and all possible concern for the growing generation; efficiently utilizing labor resources and ensuring efficient migration flows corresponding to plans for the development of the country's new economic regions.

There is no need for special proofs of the direct connection between the enumerated directions in demographic policy and the tasks of social development and social planning.

How do individual aspects of the demographic situation and, consequently, demographic policy blend in the general system of social policy and planning? Using the population movement as an example, it is possible to show the interconnection of demographic and social-economic factors. Naturally, people

wishing to change their places of residence try to select regions with good climatic conditions. At the same time, the national economic goals of our country's economic development urgently require settling the regions of Siberia and the Far East. Special surveys have shown that the high wages established in those regions are an important, but by no means the only, factor in ensuring a high acclimatization of new settlers. The establishment of a normal economic infrastructure, a high level of domestic services, provision with children's preschool institutions, development of the system of higher and secondary specialized educational institutions, and so forth are of no lesser importance. Implementation of an active demographic policy based on a set of social and economic measures in the country's newly developed regions can provide especially effective results.

The growing role of social aspects in the utilization of labor resources is a special problem. This includes problems of adapting equipment and working conditions to man, improving the general educational and vocational training of personnel, and developing forms of employment with due regard for the characteristics of labor utilization by various sex-and-age population groups.

The efforts to prolong the life span and preserve people's work fitness--important indicators of the way of life and the living standard--are some of the most important directions in demographic policy. The measures taken in this direction begin with protecting mothers' and children's health. The planned development of public health and improvement in the quality of medical care make it possible to expect a decline in mortality among newborn and unweaned babies in the future. A low infantile mortality is also ensured by the necessary medical control over the labor hygiene of pregnant women, intensified patronage supervision of newborn babies, observance of the requirements for children's food and domestic hygiene, and teaching parents baby care rules (according to the data of some surveys, one-half of the mothers do not have knowledge of children's care).

Preservation of man's maximally long work fitness under conditions of urbanization and scientific and technical progress raises the problem of man's adaptation to urban living conditions, which is impossible without a fundamental technical restructuring of the urban environment with the application of modern planning and building methods.

The negative effect that drunkenness and alcoholism have on all the spheres of human activity is well known. A systematic fight against them is also one of the measures of preserving work fitness. Developing a hostile attitude toward them, especially among children and the growing generation, is the ultimate goal in this area. The family, school, public organizations, and all the means of agitation and propaganda should combine their efforts for this.

Granting women the opportunity of combining motherhood with participation in public labor makes it possible to optimally stimulate the birth rate and improvement in the education of the growing generation together with a fuller satisfaction of the needs of the national economy for manpower. The establishment of an especially preferential work regime for women with babies and young children is the most important measure here. A rapid development of various services facilitating housework is also very important.

Many socialist countries practise a special housing policy with respect to families with children and make provisions for their housing and a systematic improvement in their housing conditions as the number of children increases (such measures were also purposefully implemented in the USSR, in particular in the city of Tolyatti, and proved to be quite effective), the establishment of a system of resort hotels for rest with children, a reduction in the cost of children's goods, a free supply of medications and baby food for infants, free meals in schools, free passes to children's rest institutions, and so forth.

Measures to help women get vocational education and rural youth to find urban occupations and get acquainted with the urban way of life have an indirect effect on reproducing the population in regions where its mobility is reduced.

A correlation between women's educational level and the number of children in the family, between women's employment and the birth rate level, and so forth is observed in the USSR, as in many countries throughout the world. In our opinion, the basic problem facing scientists and practical workers engaged in birth rate problems can be formulated as follows: How to find the real, not the ideal, demographic optimum in our country? The point is that some authors have correctly raised the question of the need to establish the demographic optimum, but have implied by this a certain "ideal" optimum, that is, a number of children in the family (two or three children), which would correspond to theoretical ideas of the optimal combination of family and society's needs. At the same time, we do not have sufficient data to understand the extent to which this theoretical optimum can be satisfactory in reality and the efforts that will be required from society for this. Therefore, there is a need for special research at the interface of economics, demography, sociology, and social psychology, which would make it possible to answer all these questions.

We are deeply convinced of the existence of some general patterns determining the interconnection of social-economic and demographic factors. For example, the transition from the extensive to the intensive type of population reproduction in economically developed countries is due in large measure to the growing needs of public production for highly skilled manpower. At the same time, this dependence is manifested differently under different social and economic conditions. Therefore, consideration of general and individual patterns in their set is an important methodological prerequisite for studying the interconnection of social-economic and demographic factors and the development of recommendations for the solution of social population problems.

The further development of measures in the area of demographic policy requires more profound, new scientific research.

It seems that several main research tasks in the population area can be singled out for the very near future:

development of a scientifically substantiated program for an efficient demographic policy, which will encompass production, way of life, people's health, problems concerning the family and children's education, and so forth;

more in-depth study of foreign experience, primarily that of countries of the socialist camp, in encouraging demographic development;

improvement in methods of long-term forecasting the size and structure of the population, including social and economic processes connected with migration, development of family relations, and way of life;

development of measures to create more favorable conditions for protecting the health of mothers and babies, educating children, and prolonging the span of man's life and activity;

continuation of measures for the further improvement in the working and living conditions of working women.

Intensification of state effect on the processes of population formation to ensure over a long-term period an expanded population reproduction, especially in the regions of Siberia and the Far East, is the main task of the 12th Five-Year Plan in the area of demographic policy. In the area of employment, conditions should be created for a significant increase in labor efficiency, improvement in the general educational and vocational training of personnel, and development of flexible forms of employment with due regard for the characteristics of labor utilization by individual sex-and-age population groups.

Toward the more distant future, research tasks were reflected in the overall program of research on demography adopted by the Scientific Council of the USSR Academy of Sciences "Social and Economic Population Problems." Such prominent Soviet scientists as M. S. Bednyy, A. Ya. Boyarskiy, A. G. Volkov, V. G. Kostakov, and others took the most active part in the creation of this program.

This program envisages the following basic tasks: studying methods of affecting population processes; determining the most desirable type of population reproduction; developing methods of utilizing various measures of demographic policy and evaluating their efficiency.

To accomplish these tasks, research should be conducted in several interconnected directions:

problems of general population theory and policy; criticism of bourgeois population theories and of demographic policy;

study of the efficiency of demographic policy in the USSR, as well as in socialist, developed capitalist, and developing countries;

social and economic problems concerning the reproduction of the population and labor resources in the USSR; the problem of the population's aging; demographic problems of urbanization;

analysis of social-economic and medico-biological factors determining changes in sex-and-age mortality coefficients and development of measures to lower them; methodological problems of measuring the life span; problem of the

population's labor and health depending on the effect of specific social and demographic factors; overall study of interconnections between demographic processes: the level of the population's birth rate, mortality, and density and the population's social characteristics, on the one hand, and the level of public health development, on the other; overall study of the effect of social-economic and medico-biological factors on the birth rate level; demographic development of the family and methods of measuring and analyzing it; development of statistical methods of measuring, analyzing, and forecasting the birth rate; social-hygienic and medico-biological factors in the family's reproductive function;

analysis of the population's social and economic structure and of the patterns in its change under conditions of developed socialism; study of the demographic behavior of individual social groups; methodology of analyzing the mutual effect of social and economic development and of the social and demographic situation;

ways of forming the population's employment with due regard for the goals of demographic policy throughout the country's territory.

As can be seen from the nature of the problems enumerated above, their research requires an overall approach and joint efforts on the part of scientists in different specializations. For example, the theoretical substantiation of the principles of demographic policy is possible only with the joint participation of demographers, philosophers, sociologists, historians, economists, legal experts, ethnologists, and other specialists. Further ways of lowering mortality and prolonging man's life span cannot be investigated without an active participation of physicians, hygienists, and ecologists. Cooperation with geneticists is also possible here. The study of problems concerning the combination of maternal functions with women's participation in public activity and of measures to control alcoholism and smoking requires the joint efforts of demographers, sociologists, legal experts, and physicians. An in-depth analysis of the demographic situation, disclosure of the interconnection of various factors affecting the population's natural movement, and forecasting of the size and structure of the latter are now possible only with the use of modern mathematical methods and computers. Nor can demographic problems be solved without a connection with basic tasks concerning national economic planning and management and the distribution of productive forces and, therefore, require the participation of representatives of specific economic disciplines, in particular labor economics.

All this points to the need for the closest coordination of this research among the institutes of the Academy of Sciences, as well as for intensified cooperation with other departments and institutions. Such cooperation would contribute not only to a rapid development of demography, but also to a rise in the scientific level and efficiency of many other social sciences.

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MUKRAN-KLAIPEDA RAILWAY FERRY PROBLEMS, PROSPECTS

Moscow NEW TIMES in English No 16 (27 Apr) 1987 pp 24-26

[Article by Nikita Zholkver]

[Text]

Reports on the opening of the "bridge across the Baltic" between the Soviet Union and the German Democratic Republic last autumn featured prominently in newspapers and magazines in the two countries. And they deserved to, because a project unlike any in the world had been commissioned. But for the full potential of the ferry to be realized, a number of complex problems must still be solved.

The causeway

The island of Rügen, on whose eastern shores the ferry terminal is being built, is linked with the mainland by a narrow causeway, along which run both a highway and a single railway track. There is no room for a second line. Moreover, in the middle of the causeway there is drawbridge. So 4-5 times a day, all traffic stops for about half an hour to let ships pass to and from Stralsund Bay. Cars pile up and trains are forced to wait.

We were lucky. Our Wartburg car was not caught in the jam and we got through quickly to the other side of the island. Just before entering the town of Sassnitz—the northernmost town in the republic—we turned to the right and stopped at the passport control checkpoint. Then we were on the site of the ferry terminal, which covers an area of 200 hectares.

It seemed unusually quiet in the head office. In fact, this was not surprising. The pace of work was such that each person on the staff was busy and had no time to ramble aimlessly down corridors or chat on the stairs.

We found the office of the director of the Mukran terminal, Rudi Sickert. His secretary asked us to wait as we were early for our appointment.

"I can give you an hour," said Rudi Sickert, as we shook hands. "So fire ahead with your questions."

First I spoke of the doubts that had arisen as we drove along the causeway. So far only one ferry was in operation. But there are to be six in all. That means a lot of railway cars. Would the causeway's traffic capacity be enough?

"A logical question," replied Rudi Sickert. "The causeway is indeed our weakest point. Six ferries mean 20 goods trains a day. In addition, there will be passenger trains. But our calculations show that the causeway would be able to take the load. And beyond the bridge there is a bypass. So everything should be all right if a strict schedule is kept to. There are also plans to build another causeway. Not because of the ferry traffic, but because the existing bridge was built more than 50 years ago and does not meet present requirements. But, I repeat, the ferry will be able to operate normally in existing conditions."

I would have liked to share Rudi Sickert's optimism. But keeping strictly to the railway schedule would not be an easy job. In the course of my trip to the German Democratic Republic I had travelled three times by train, and not once had it left or arrived punctually. The delays had amounted to 15, 20 and 40 minutes respectively. When I remarked on this, I was told that the Reichsbahn is facing some pretty formidable difficulties: there are staff shortages and many of the lines require repairs. But to return to Mukran.

Speed

"What prompted the construction of 'the bridge over the Baltic'? When did the idea originate? And why was a ferry chosen?"

"The idea of a ferry was first mooted in the 1950s. But then it was dropped. Understandably, as there was no urgent need for it. At the end of the 1970s the question cropped up again. The volume of trade between the German Democratic Republic and the Soviet Union was growing rapidly. Today it is three times greater than it was in the early seventies. And the traditional routes—rail and sea—were overloaded. It was decided that their development was not economically feasible and so the ferry route was chosen."

Sending cargoes by rail costs 6 times more than by sea. But if the extra 5.3 million tons a year that the ferry is expected to cope with are sent by freighters it will require an additional 14-16 wharfs at both ends of the route, not to mention 5-6 thousand dockers.

"There was another weighty argument in favour of the ferry," continued Rudi Sickert. "The saving in time. That plays a decisive role in the economy as a whole, and in its transport service particularly. Time is indeed money on the transport services. One of the advantages of the ferry will be that about 20 per cent less time will be spent transporting goods than by sea or rail. The ferry turnover is 48 hours: 20 hours in one direction (a distance of 273 nautical miles—that is, about 506 kilometres), four hours at each end for loading and unloading operations. Energy expenditure is also less. Moreover, train has to cross two frontiers—

the ferry only one. Less time will be spent on customs formalities. And the distance is shorter. So the economic arguments all favour the ferry. Yet the Western press has claimed that the ferry was being built for military purposes. An unbiased person can see clearly that its main purpose was to resolve the problem of transporting ordinary cargoes between the two countries. Of course, any transport route can be used to carry military cargoes, and a military purpose can be ascribed to any project—even an ordinary house can allegedly be used for military barracks. The ferry is no exception. But, I repeat, strategic considerations did not play a decisive role."

1,625 days

That is the exact number of days that elapsed between the moment when the first bucket of soil was scooped up and the completion of the first phase of the ferry project. On October 2, 1986, the first ferry flying the flag of the G.D.R., the Mukran, set out for Klaipeda.

Rudi Sickert explained that four main reasons governed the choice of the small fishing settlement of Mukran as the site for the new port. Mukran is the easternmost village on the island, and, hence, the closest to Klaipeda. It has a convenient surface area and sufficient depth. That last is a major consideration, as deep waters on the Baltic coast are rare. Moreover, Mukran is a convenient link for senders and receivers of cargoes. For the main centres of our industry, Rudi Sickert added, are in the central and southern parts of the country. There are only two railway lines running north. One leads to the port of Rostock, the second to Sassnitz, and its capacity is not fully used.

But as often happens, the choice of Mukran also had its share of disadvantages. First, it meant starting virtually from scratch. Unlike most Baltic ports, Mukran has no natural barriers. They have had to be built. The northern pier, almost a kilometre and a half long, has been completed, while the southern one is still under construction. They will protect the harbour area and the ferry terminal from storms. The entire project is to be completed by December 1989. By last autumn 60 per cent of the investment in the project had been used.

The bridge

A couple of weeks before I traveled to Mukran I was in the port of Ilyichevsk on the Black Sea—the terminal of the ferry link with Varna, Bulgaria. I watched the loading of railway cars there. A shunting engine pushed two cars onto the middle deck of the ferry (the ferries are three-deckers and can accommodate 108 cars). ("Stop! Back up a bit! The logs are grazing the ceiling!") The two cars are placed on a lift which takes them either to the top deck or the bottom one. Then minilocomotives (there's one on every deck except the middle one) remove them from the lift, take them to the turntable and then deliver them to their loading place. The entire procedure takes about 10 hours if there are no hitches, that is. If the expensive Western-made lift breaks down, it means a holdup, or only the middle deck can then be used. Even I, anything but an expert in such affairs, found the whole procedure very complicated and hardly economical. In Mukran an entirely different solution has been found.

"Our task," Rudi Sickert said, "was to transport 5.3 million tons of cargo annually over a distance of 506 kilometres. That required so many hours. Calculating how many cargo vessels would be needed was simple. Using the Ilyichevsk procedures, we would have needed two more ferries. That was expensive. The only way out was to cut down on port time. And with that in mind we looked for an alternative. We decided on a double-decker bridge that would enable both decks of the ferry to be serviced simultaneously. This also eliminated the need to push the cars around on the ferry itself, as well as the need for a lift, turntables and minilocomotives. The entire loading-unloading process could be completed in four hours."

The double-decker bridge is the heart of the ferry terminal. It is a unique structure, and has been patented in many countries. Although it weighs all of 450 tons, it is easy to handle and docks smoothly with the boat.

"Which is cheaper: a lift on a ferry or a double-decker bridge?"

"Not an easy question to answer," replied Rudi Sickert. "But, as I said, if we hadn't chosen the bridge, we would

have needed two more ferries. I would put it this way: the port terminals cost more than those in Ilyichevsk or Varna, but since we have cut down on port time, in Mukran we will recoup on our investment much sooner. Here, placing a car or removing it from the ferry takes on average just under a minute, while in Varna and Ilyichevsk upwards of three minutes—three times as much—are spent on the operation. Draw your own conclusion. But remember that transportation time is of prime importance."

The railway car

When Europe started building railways, the standard gauge of the track was 1,435 mm (the distance between the wheels of a British mail carriage). In Russia a wider gauge was chosen—1,520 mm. Ever since, the problem of reconciling the two has existed. Anyone who has made the journey by rail across the Soviet frontier stations Brest or Chóp knows that the railway cars are lifted onto different wheel carriages. The operation takes over an hour. Nor can this be avoided in Mukran. So a special shop has been built for the operation.

The ferries themselves have the wider gauge. That proves to be more profitable, since it increases the load capacity by 30 per cent. If the European standard gauge had been used, another three ferries would have been needed.

Since the gauges of the railway tracks are different, changing wheel carriages is unavoidable. But that is only half the problem. It turned out that only 10 per cent of the railway cars carried by the ferry could have their wheel carriages changed. From the other 90 per cent, cargoes had to be unloaded into local cars (two for every incoming car). Although the difference in gauges is a mere 85 millimetres, most Soviet goods cars are much bigger. And they risk bumping into signal posts, platforms and other engineering structures.

"If the Soviet Union made wider use of cars that can be switched to our gauge," Rudi Sickert told me, "we could save a lot of precious time."

Another thing I noticed in Ilyichevsk was a large number of empty cars on the ferry. When I remarked on this, people in Ilyichevsk shrugged their shoulders. What can we do? The cars that carry timber to Bulgaria can't be used to

carry back tinned goods.

"Do you have such problems?" I asked Rudi Sickert.

"Unfortunately, yes," he replied. "The structure of the trade turnover does affect us as well." He picked up a file and, taking a paper from it, suggested I look at it. "We receive iron ore, aluminium and paper. And we send off to Klaipeda farm machinery, furniture and prams. You can't load a combine harvester into a boxcar that carried ore. It needs a flat car. So we have our share of empty cars—about 15 per cent of the total."

A few words in this connection about the Black Sea ferry. It seems that it is not only the structure of the trade turnover that is responsible for the empty cars. As the Bulgarian paper Rabotnichesko Delo wrote at the end of January, "The ferry's Achilles' heel is the lack of proper coordination between the shipping agency and the railway administration." That affects the smoothness of ferry operations. Indeed, no trade turnover structure can explain the fact that on January 8 the ferry "Heroes of Odessa" left Varna with 50 empty cars on board. And that was no exception. The paper pinpointed the reason as the irregular deliveries of goods to be exported by factories and firms.

The Secretariat of the Central Committee of the Bulgarian Communist Party discussed the prospects of the Varna-Ilyichevsk ferry. A number of Bulgarian ministries and departments were instructed to draw up, together with the Soviet side, steps to improve their cooperation.

Prospects

So far the "bridge across the Baltic" is used only by the two countries that built it. Cargoes are sent and received by enterprises and organizations in the G.D.R. and the U.S.S.R. But the potential of the ferry—especially taking into

account that a second terminal is now under construction—are such that much wider use could be made of them.

Several transit routes now pass through the German Democratic Republic. The ferry line Sassnitz-Sweden, for one. The Scandinavian countries make extensive use of it, as it is the shortest route to Western and Southern Europe.

"Is the German Democratic Republic considering using the ferry as a means of earning foreign currency? Could it serve as a transit point for goods destined for Western Europe?"

"Yes," replied Rudi Sickert. "Eventually we shall offer our services to other European countries." He spoke of plans to build a similar ferry link between the U.S.S.R. and the F.R.G. A promising

idea; as their trade links are well developed, and Federal Germany also does considerable business with Japan. West German firms are interested in a reliable transport route to the Far East. Across Siberia by rail, and then across the Baltic by ferry would be much quicker than way half round the world by sea. Rudi Sickert believes that the possibility of using the already existing Mukrain-Klaipeda ferry for this purpose has not been ruled out in Federal Germany. It would be simpler than building a new one.

"If such agreement is reached, then the cargoes carried for the F.R.G. will be over and above the 5.3 million tons a year planned at present?"

"In principle, yes. But we could also allocate then a share (say, 500 thousand tons) of the present 5.3 million."

* * *

Rudi Sickert glanced at his watch.

"I hope I have at least partially satisfied your desire for information."

I took the hint, and rose to leave, thanking him for his highly informative interview.

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PRAVDA REFLECTS ON 'ADMIRAL NAKHIMOV' CASE

PM030929 Moscow PRAVDA In Russian 1 Apr 87 First Edition p 6

[TASS dispatch: "Disaster at Sea: Lessons and Conclusions. Trial in Odessa Has Ended"]

[Text] Odessa, 31 March--Yesterday the trial ended here of former Captains V. Tkachenko and V. Markov, who were to blame for the collision as a result of which the passenger liner "Admiral Nakhimov" sank off Novorossiysk 31 August 1986 with great loss of life. The case was heard in open session by the USSR Supreme Court Judicial Collegium for Criminal Cases, chaired by A. Filatov.

For more than 2 weeks the country's highest judicial authority studied carefully every episode of the tragedy at sea. The causes of the crime and the circumstances which contributed to it were deeply and impartially investigated.

The court hearing took place in the hall of the Odessa Railroad Workers' Cultural Center in an atmosphere of broad democratism and openness. No less than 269 victims and relatives and friends of those who perished expressed a wish to take part in the trial. Each of them was able to put questions to the accused and experts and to submit petitions to the court on the same basis as the members of the court and representatives of the prosecution and the defense. Many availed themselves of this right. Not a single question was disallowed, not a single petition was rejected. This atmosphere made it possible to recreate the full picture of the disaster and to reveal its causes. The court sessions were attended by representatives of the public and the mass media.

During the preliminary inquiry, which ran to 55 volumes, and the court hearing the guilt of the accused was incontrovertibly established. The court determined that they both, as captains, heads of crews, and agents of the state responsible for the safe navigation of their ships and the safety of the people and goods aboard, permitted many extremely gross violations of the rules of safe navigation and that it was this which led to the serious crime. This crime was a direct consequence of their criminal negligence, neglect of their official duties, and indiscipline.

In his indictment L. Baranov, senior assistant to the USSR prosecutor general, said that it was extreme manifestations of irresponsibility, laxity, and lack of

discipline that were on trial, in other words, the pernicious phenomena which the communist party and the entire Soviet people are now resolutely and uncompromisingly combating in their efforts to vigorously establish order, organization, and discipline in our life. This thought was also emphasized by civic accuser V. Treguba, captain of the "Geroi Shipki" ferry. Speaking on behalf of the Black Sea Shipping Company Captain's Council, he noted that thousands of crews of merchant and passenger ships doing a difficult job in all latitudes of the world ocean have earned high international prestige for the Soviet maritime fleet by their hard work, strict compliance with regulation requirements and international norms, and loyalty to the laws of maritime comradeship. The disaster off Novorossiysk is a bitter lesson to everyone. It confirms that the least deviation from the established norms and official duties ultimately leads to crime. This must never happen again.

The USSR Supreme Court found Viktor Ivanovich Tkachenko, former captain of the dry cargo carrier "Petr Vasev," and Vadim Georgiyevich Markov, former captain of the passenger liner "Admiral Nakhimov," guilty of the crime covered by Article 85, Part I, of the RSFSR Criminal Code and, bearing in mind the extreme seriousness of the crime and the exceptionally grave consequences of the tragedy, sentenced them to 15 years' imprisonment each. The court rules that each of the guilty parties should be fined R40,000 as compensation for the material damage caused by the state. The sentence is final and not subject to appeal.

Those present in the hall greeted the sentence with satisfaction.

The court did not confine itself to determining the degree of guilt attaching to and the measure of punishment to be imposed on those directly responsible for the sinking of the passenger liner "Admiral Nakhimov." During the trial the question was raised most pointedly as to how Tkachenko and Markov--whose professional and personal qualities did not match the high demands made on captains--could have held such elevated and responsible posts. An interlocutory finding was sent to the USSR Ministry of the Maritime Fleet (Minister Yu. Volmer) drawing attention to the serious deficiencies in the cadre work of the ministry's organs and its technical policy.

Materials about the shortcomings in the work of the Black Sea Shipping Company Novorossiysk Rescue Service, whose ships arrived late at the scene of the accident, will form the subject of separate proceedings.

The ruling of the country's highest legal authority was assessed by the trial participants and representatives of the broad public as a reminder to everyone, whatever their post, or the need to fulfill the duties entrusted to them efficiently and scrupulously. This formulation of the question follows directly from the decisions of the 27th CPSU Congress and the CPSU Central Committee January (1987) Plenum on the need to enhance exactingness, discipline, organization, and order in all spheres of our life.

The trial in Odessa has focused public attention on a whole series of questions which are now at the center of work for the restructuring of our society. This applies primarily to problems connected with the selection, training, and placement of cadres.

"The disaster at sea off Novorossiysk, as the court established, was the result of gross violations by the captians of mandatory instructions and requirements, compounded by criminal complacency and indecision at a critical moment," Captain First Class G. Cherkasov, head of the Department of the Naval Search and Rescue Service and one of the experts at the trial, said. "In our age of accelerated technical progress, the human factor not only does not recede into the background, but on the contrary, plays an increasingly important role everywhere, the sea lanes included. The case of the former captians of the passenger liner and the dry-cargo carrier has shown that much more attention must be paid to instilling in specialists the qualities essential in leaders of labor collectives."

One can only agree with the expert's opinion. However, maybe the question should be raised in broader terms. Negligence, indifference, neglect of direct duties, and lack of initiative at the requisite moment and of the ability to think and act imaginatively in a complex situation are a serious disease which has its roots in the recent past. And it is not just a question of the people in charge of ships or shops, driving trains, or organizing work at construction sites.

An operation carried out by a machine tool operator in violation of technological discipline and defective output allowed through by quality control workers and overlooked by assembly workers do not amount merely to poor workmanship. Frequently they are fraught with a danger to society, including people's health and lives. No one must forget this for a minute.

The increasing capacity and speed of machines, machine tools, production lines, and installations increase the cost of every mistake and miscalculation. There is no room for indifference or complacency here--phenomena which, unfortunately, we still frequently encounter, not just in the production sphere.

A pedestrian in a hurry thinks nothing of crossing the street where he is not supposed to or if the lights are on red. Settling down in an aircraft, some passengers are in no hurry to comply with the mandatory safety regulation and fasten their seat belts.

Violations begin with small things, but each one leads to a slackening of the sensible and clear social discipline which we now need so badly everywhere. This is the reminder issued by the Odessa trial, the detailed and thorough analysis of the causes of the disaster at sea, the pain of which remains in the hearts of Soviet people.

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RESCUED SHIPCREW INTERVIEWED, U.S. PRAISED

LD181857 Moscow Domestic Service in Russian 1630 GMT 18 Mar 87

[Text] An Aeroflot aircraft today brought home from the United States the crew of the dry-cargo vessel "Komsomolets Kirgizii," which sank. At Moscow's Sheremetyevo Airport, our correspondent Vladimir Mikhaylenko met them:

[Begin recording] [Mikhaylenko] They pass through customs with no particular formalities. They have virtually nothing to be inspected. Everything they had with them on that ill-fated voyage is now lying at the bottom of the sea, with the vessel. Both frontier guards and customs officials greet the seafarers sympathetically, with a smile, a stamp in their passports, another smile, and good wishes when they bid them farewell. All of them are well, safe, and sound. But of course one senses that they have experienced their share of fear.

Here at Sheremetyevo the arriving crew of the vessel is met by representatives of the Ministry of the Maritime Fleet.

[Unidentified man] At last we're home!

[Mikhaylenko] The first to welcome them on their native soil is Oleg Alekseyevich Savin, deputy minister of the maritime fleet. He greets the crew and their captian, Vladimir Viktorovich Kurashov. He was the one who took charge of the evacuation, and was the last off the ocean-going freighter, capsized during a storm.

[Savin] To us the greatest joy is that today we are meeting the full complement of the ship's crew, a crew which fought to the last moment for the life of a ship, a crew which worked in the most severe conditions, storm conditions, in an organized and intelligent fashion. And they were able to discharge their duty to the full.

[Mikhaylenko] I understand these flowers are for you, these carnations.

[Shatova] (identified later in program) Yes.

[Mikhaylenko] Among the 37 crew members there were three girls. Is that right.

[Shatova] Yes, three girls.

[Mikhaylenko] What's your name?

[Shatova] Marina (Shatova), an orderly.

[Mikhaylenko] What was it like for you? Was it frightening?

[Shatova] Just a little.

[Mikhaylendo] How did your rescuers behave?

[Shatova] Wonderfully! They were great. Very hospitable.

[Mikhaylenko] What would you like to say to them now, from your native soil?

[Shatova] What would I like to say? A very big thank you, of course. And to wish them health, happiness, and kindness.

[Unidentified man] It was very worrying and alarming. Now at last were home.

[Mikhaylenko] Vladimir Viktorovich, you've been written about and talked about a lot lately, you and your crew. Are you, as captain, satisfied with the way your crew worked in those conditions?

[Kurashov] Yes, personally, as captain, I am satisfied that the crew showed their courage in such a critical situation.

[Mikhaylenko] That is, they fought for the life of the vessel.

[Kurashov] Yes, they did, of course. Then the list started increasing, to 30 degrees. Then I got in contact with the U.S. Coast Guard and asked for their help, over the radio-telephone.

[Mikhaylenko] They didn't have an easy time of it either, in the storm.

[Kurashov] No. One must give them all credit, because the helicopters couldn't even hold steady above the ship. The wind kept shifting them off.

[Mikhaylenko] They couldn't hover over it?

[Kurashov] No. They made five or six attempts to pick up the people. Of course, the lads showed great courage. They rendered such enormous assistance, and rescued all the people.

[Mikhaylenko] Did you at least have time to write down the names and addresses of your rescuers?

[Kurashov] Yes, of course, without fail. We'll keep them all our lives. We got to know each other, then they had a meeting with the president, the helicopter pilot received an award. And our whole crew was present at this ceremony. The helicopter crews had their photographs taken after the ceremony in

the White House alongside the crew members they saved. They all expressed their thanks to them, the whole crew thanked them. They were, I think, very happy at that moment. All the people--the Americans--understand that these are the kind of relations that there should be between people, to give each other help if people get into difficulty. Our sailors too always give assistance to foreign sailors, and there are an awful lot of these incidents. People get to know each other better in difficulty than--let's say--in other conditions. So here it was shown emphatically that if people get into trouble, in general then their relationship immediately becomes closer.

[Mikhaylenko] The laws of sailors' and people's brotherhood were at work here?

[Kurashov] Yes, people's, yes.

[Mikhaylenko] Are you pleased as a captain with the work of your crew in these conditions?

[Kurashov] Yes, personally as a captain I am pleased that the people all displayed courage in such a critical situation.

[Mikhaylenko] I see that externally you all have no bandages, no splints, no bruises, you are live and healthy.

[Kurashov] We are healthy, of course: I had one finger a little out of joint, but that 's nothing to worry about.

[Mikhaylenko] Compared to what could have happened.

[Kurashov] Yes, of course.

[Mikhaylenko] Well, happiness and all the best to you on your return to home soil. [end recording]

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